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# *The Respective Standpoints of Psychology and Logic*

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By  
MATILDE CASTRO

## PHILOSOPHIC STUDIES

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THE RESPECTIVE STANDPOINTS OF  
PSYCHOLOGY AND LOGIC



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BY  
✓  
MATILDE CASTRO



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CHICAGO, ILLINOIS

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## INTRODUCTION

### THE PROBLEM

The determination of the status of relationship obtaining between logic and psychology is a problem of such vital import to philosophy, in general, that it is hardly possible to consider any phase of it without touching live wires of epistemological and metaphysical controversy. Indeed, it has become the practice of contemporary philosophical criticism to trace back any fundamental divergence of views respecting the more ultimate issues of philosophy to a difference in premise regarding this relationship. Are we doomed to strain our vision toward an absolute reality, whose lineaments remain forever beyond the threshold of our experiential sensibility, and to grasp after, yet never hold, that eternally elusive cup of Tantalus, Truth, universal and immutable; or may we look into the familiar and homely countenance of reality whenever we face a practical problem, and refresh ourselves with truth at every step of the traveled road? These two philosophical attitudes represent the extreme limits within which present-day epistemological and metaphysical discussion falls. The logic basal to the latter, the pragmatic, formulation of the nature of truth and reality, asserts that the judgment taken in its concrete everyday setting will reveal, actually operative, now as ever, the formative forces of reality; that only through such a study of reality-in-process-of-formation and of truth-in-operation can the nature of either be discovered. Absolutism, however, insists that this amounts to nothing more than the analysis of a psychological process, and, as such, can never yield data for an adequate interpretation of reality. Thus, pragmatism points the finger of warning at the empty and futile metaphysical consequences which ensue when logic deserts the standpoint of the individual experient, to search for truth in a realm of a never-to-be-experienced reality, and absolutism, in turn, continues to charge pragmatism with building upon a logic so corrupted by its affiliation with psychology that it must forfeit the use of the categories of universality and necessity, and must abandon all hope of exhibiting anything worthy the name of objectivity.

It is obvious that logic and psychology play leading rôles in the philosophical drama of today—that the dispute as to the nature of their interrelation affords the setting, as it were, for the final ‘confrontation of forces,’ upon whose resolution hangs the fate of current philo-

sophical systems. There is a suggestive concreteness and openness to attack in the reduction of the larger philosophical situation to these comparatively simple terms, but the promised accessibility is somewhat illusory, since both psychology and logic are extending their boundaries to include the so-called more abstract disciplines under their jurisdiction. Thus there is retained all the complexity of the wider controversy, for all of its factors are involved.

That a psychology which has endeavored to free itself from metaphysical leading-strings and which has grown so remarkably under the nurture of natural science should now press its right of dominion even to the very outposts of metaphysics itself, has not a little the effect of a paradox.<sup>1</sup> Nevertheless, though this evolution of an 'empirical' psychology into metaphysics may, at first sight, suggest rather an Alice-in-Wonderland metamorphosis than a genuine process of development, the change appears less abrupt, when it is borne in mind that psychology has but to prove its identity with logic, to accomplish the transformation easily and plausibly; for epistemology and metaphysics are indissolubly one in recent discussion, and logic is their basis of operation.

Metaphysics and epistemology are today regarded as but two modes of approach to the same problem; the consideration of the nature, source, and function of knowledge involves the determination of the nature of reality and the relation of thought to it. Metaphysics, on the other hand, cannot fix upon Thought, or a Something-Other, as a final and all-inclusive 'ultimate,' without showing what disposition is to be made of the other term with reference to it. In other words, the problem of knowledge is no longer that of investigating the forms and activities of pure thought, but is the knowledge-of-reality problem. It is not so evident that logic, especially that known as instrumental, and more vaguely as pragmatic, is thus closely allied with epistemology and metaphysics. Yet it may be said that, despite increasing and seemingly implacable feuds among logicians as to other first principles of logic, there is unanimous agreement, at present, that the judgment is the unit of the knowledge process, and that it can no longer be defined as the predication of one *idea* of another, either by way of synthesis or analysis. Rather, every judgment is held to have existential import, or is to be defined as the mutual reference of an ideal content, as predicate,

<sup>1</sup> Angell, "The Relations of Structural and Functional Psychology to Philosophy," *University of Chicago Decennial Publications*, First Series, Vol. III, Part II, pp. 18-21 (page reference is to monograph reprint).

to a reality, as subject. However variously idea and reality may be interpreted by different schools, the judgment so defined brings logic into direct contact with epistemology and metaphysics; for it presents in specific subject-predicate form the problem central to them, namely, the relation of thought to reality.

Instrumental logic is, then, no less epistemological than the logic of absolutism, against whose particular brand of epistemology it has waged such telling polemic,<sup>1</sup> but whereas the latter finds it necessary to transcend the conditions under which thought and reality appear in any concrete instance of judging, in order to discover their true, that is, their unconditioned and absolute, nature, the former accepts the subject-predicate connection there found, as adequately representative of the relation which thought sustains toward reality, anywhere and everywhere. The logic of absolutism, that is, may maintain that the reality which appears as the subject of the judgment is a mutilated fragment, torn and twisted from the reality which lies in its really unassailable entirety and continuity 'beyond the act' of judging, and that thought, as it appears in the form of a predicate, suffers from the vicissitudes of temporal circumstance, and therefore falls short of spanning universal and eternal truth. Accordingly, if logic would study thought as the vehicle of truth, absolute, it must abandon its basis in the empirical judgment, and take on a more epistemological character. It must, that is, deal with thought 'at large' and reality *per se*. Instrumental logic, on the contrary, holds that the judgment, in its immediate experiential setting, provides the conditions under which thought and reality always occur or exist, e.g., as comembers of a distinctive phase of experience, and that the characteristics and functions which they there manifest, and these only, are revelations of their true nature. From this point of view, thought 'at large' and reality *per se* are abstractions, and not real values functioning in experience. The problem of establishing a relation between them is, consequently, purely a factitious one. Opponents refuse to concede to this position anything approaching epistemological dignity, but its protagonists assert that the standpoint and the methodology which it implies furnish the only mode of approach to a valid epistemology and a tenable metaphysics. Instrumental logic, indeed, regards itself as a sort of laboratory in which the 'elements' of metaphysics may be discovered through experimental observation of the judgment process, and to which, in turn, metaphysical 'ultimates' may be returned to

<sup>1</sup> Dewey, *Studies in Logical Theory*, chaps. i-v.

be tested for their 'workability.'<sup>1</sup> Instrumental logic thus becomes a *terminus ad quem*, as well as a point of departure, for metaphysics and epistemology.

It is with the logic which enters the highway of metaphysics via the judgment in its empirical context that functional psychology claims identity of standpoint.<sup>2</sup> But having chosen at the crossroads, psychology must travel on undaunted even to the Dark Tower of pragmatism. With its record of sober scientific achievement behind it, psychology may well hesitate to lay itself open to the necessity of meeting the characteristic charges of unstable and irresponsible radicalism so often preferred against pragmatism. Yet once casting its lot with the logic which is presumably basal to the various pragmatic formulations, it cannot hope to leave the road open to any metaphysic, that is, it cannot hold itself a prolegomenon to metaphysics in general, but must commit itself to some specific destination, namely, that which is the outcome of locating the real, and not some mere transcript, or symbol, or *minimum sensible*, of reality, wholly within experience, and of finding truth, as absolute and eternal as you please, in every successful performance of the judgment.

The chief indictment against this metaphysical basis has been that it shuts reality up to subjectivity, and truth to the vagary of particularity. Instrumental logic has repudiated such metaphysics and functional psychology would hardly make a point of proclaiming this as its metaphysical destiny; for it has long been an accepted tradition that this is precisely the type of metaphysics which results from the projection of the psychological standpoint into a world-view. Now, psychology is not a little to blame for the circumstantial evidence upon which this accusation continues to be based, for in adopting a new standpoint it has not made clear that it has abandoned the old—if indeed, it has—with reference to which the verdict holds. The psychology, which interprets consciousness as an adaptive mechanism, viewing it in its objective environment as a process operative among realities which are not themselves 'states of consciousness,' and that which deals with reality or experience only as it is transcribed into a structure or process of consciousness—these are held not only compatible but perfectly confluent. This tendency to conciliation is a marked feature of present-day psychological development. Conservative and

<sup>1</sup> Dewey, *Studies in Logical Theory*, chap. v.

<sup>2</sup> Angell, "The Relations of Structural and Functional Psychology to Philosophy," *University of Chicago Decennial Publications*, First Series, Vol. III, Part II, pp. 13-14 (page reference is to monograph reprint).



radical at once, it adds the new as simple supplement to the old. Thus "idea" or "process" psychology, and "self" psychology are regarded as two parts of one whole, although the introspective deliverances of the latter, if not definitely antithetic to the pronouncements of the former, are, at least, facts available only from a distinctly different vantage-point. Functional psychology, which seems at times to desert altogether the standpoint of the spectator of 'inner consciousness' for that of the direct experient, offers protective shelter for them all. If it be true, however, that no radical shift in viewpoint, or fundamental change in premise, is necessary in passing from one type of psychology to another, then there is, we take it, a conspicuous break in the continuity between functional psychology and instrumental logic.

Whatever constructions or misconstructions have been erected upon it, instrumental logic as it appears in the *Studies in Logical Theory* and free from the subsequent accretion of corollaries, is not one with psychology. The 'world-picture' which this logic paints has little in common with the pattern drafted after the ordinarily accepted psychological measurements; its individualism, empiricism, and idealism take on a different coloring from an eye which looks upon experience as wider than personal consciousness, and upon the individual as larger than subjectivity. Exponents of this logic have, it is true, acknowledged freely the influence which psychology, in its recent development, has had in shaping logical problems.<sup>1</sup> However, the influence has not been one-sided. Logical theory in searching for an interpretation of thought which shall invest it with the function of securing genuine knowledge of reality, and not some copy or representation of it, has been testing the psychologist's account of the structure and function of consciousness. Taking this description of the mental machinery, the logician has been asking: "If this is the kind of thing thought is, if it has such characteristics as you study it, what can it do, what is the result of its work, what is it good for, in the world to which I must translate it, the world of active endeavor and first-hand contact with reality?" By this procedure, it may be contended that logic is finding itself, but that it is at the same time discovering to psychology the fuller intent and import of its own formulations. Psychology, however, admits no such reciprocity of favor, for it now claims to study thought in just these aspects, to pursue it, indeed, to the outermost rim of reality. Psychology's 'stream of thought' threatens to rise from its bed in the states and processes of consciousness, to overflow its embankment, the "as such," and to inundate the field of reality itself. Will the waters

<sup>1</sup> Dewey, *Journal of Philosophy, Psychology, and Scientific Methods*, I, No. 3, p. 60.

recede, leaving the philosophical soil more fertile and ready for newer and better demarkations, if convenience calls for them, or will the river carry away in its Heraclitean flux of 'ever-changing' 'personal' states, all landmarks of truth and signposts to reality? Psychology affords assurance of the former, those hostile to the alliance of logic and psychology prophesy the latter fate. It would seem to be the task of philosophy to gauge the danger, and to determine whether the embankment can or need be reinforced, and the stream kept to its native bed.

Obviously there are no available definitions to afford leverage in establishing the respective confines of logic and psychology, since psychology threatens to absorb all of philosophy, and the limits of logic are equally indeterminate. The difficulty is the greater because the terms in which the definitions may be expressed are themselves infected with the ambiguity due to the shifting of old landmarks. From many quarters the complaint concerning the confusion in our present philosophical terminology continues to gain in force, until we are reminded of Bishop Berkeley's quaint arraignment of language as the source of all metaphysical ills whatsoever. The "*embarass* and delusion" of words is still held largely responsible for the "self-raised" dust which obscures the philosopher's vision. 'Consciousness,' 'feeling,' 'object,' 'subject,' the 'real,' 'perception,' 'image,' 'sensation,' the 'personal pronouns,' are a few of the items we have been asked to discontinue from our philosophical stock-in-trade pending a thorough investigation of their exact meaning. However, if we could banish all of these terms to the "limbo of unregenerate concepts" and substitute for each, as Titchener advised for 'sensation,' a "round dozen of concrete and descriptive" terms, the philosophical page might appear much simplified, but it is doubtful if the *embarass* and delusion would be much abated. The difficulty, needless to say, is not one of terminology, primarily, though such appears to be the general attitude toward the problem, judging by the continual plea for a uniform vocabulary. A commonly accepted philosophical terminology, unless truly indicative of a uniform philosophical standpoint, would, at the first attempt at application, shatter into a thousand implications of real difference. Straightway the words which describe the situation concretely for one system become abstract and obscure for another and vice versa. As Stevenson puts it: "The longest and most abstruse flight of a philosopher becomes clear and shallow in the flash of a moment, when we suddenly perceive the aspect and drift of his intention. The longest argument is but a finger pointed; and once we get our own finger rightly parallel, we see what the man meant, whether it be a new star or an old street lamp."

A term, that is, cannot be defined without definite orientation within a context, and the uncertainty in the present usage of terms is a reciprocal phenomenon of the changing of the contours of the philosophical disciplines. Old definitions were acceptable while the old lines of cleavage remained, but now they are often useless. For the purpose of differentiating psychology from the physical sciences the definition of it as 'the science of the states and processes of consciousness' may be of service, but so wide is the interpretation now given to 'consciousness' that this definition affords no differentia with respect to other philosophical branches. Indeed, the functional psychologist aims at making his study of the 'structure and function of consciousness' nothing less than a science of 'concrete experience.' Yet no definition could describe more fittingly the task of all philosophy today. For philosophy is avowedly on the alert not to state life in terms of abstract and general formulae, but to feel the pulse of *concrete living*. But how various the interpretation of the term 'concrete'! It ranges in connotation from the content of the specious present of 'pure experience,' in which is to be found the full-tide of reality in all the "warmth and intimacy" of its immediacy, to the timeless content of an absolute reality, which, packed with the "terrific totals"—to use a phrase of Henry James—of all finite partialities, and the reconciliations of all finite conflicts, may alone be deemed adequate to represent, in its perfect fulness and unbroken homogeneity, complete concreteness.

The attempt will not be made, then, to proceed from even provisional definition, to discover a clue to the nature of the relationship of logic to psychology. Rather, such definition can have meaning only as the nature of the relationship is understood. The method which suggests itself as feasible is that of following psychology through some of its representative aspects to the point where it seems to coincide with the logic which is centered in the judgment, defined as the reference of an ideal content to reality. In this way the specific nature of the claim which psychology makes will be evident. The claim that the two are identical may then be tested by examining the psychologist's account of the idea and the judgment, to ascertain whether it yields the same consequences as does that of the logician. If the consequences are different, such difference will be considered a proof of their non-coincidence. The character of this difference may then be determined more positively, and finally, an interpretation given, in the light of this differentia, of some of the typical statements in regard to the inter-relation of logic to psychology.

## CHAPTER I

### THE PREMISES OF PSYCHOLOGY

From the earlier to the later associationism, through the various forms of attention psychology, to functional psychology, there has been a progressive revision of psychological 'fact,' in the direction of meeting the demands of philosophy for an account of thought, which should make for the possibility of real and valid knowledge. There have been periods, to be sure, such as that from Locke to Hume, in which a considerable body of information concerning 'what passes in a man's understanding when he thinks' has been amassed concomitantly with an increasing skepticism as to the efficacy of thought in securing knowledge; but this is precisely the situation which had led psychology, finally, to modify its introspective findings. It is noteworthy that psychology attributes these changes, not to any genuine shift in the angle of observation, but to greater subtlety and accuracy of introspection. But observation is notoriously under the guidance of hypothesis, and it is peculiarly difficult in this case to determine how much is relatively bare fact, open to direct introspective detection, and how much is theory "concreted" into fact. It is possible that psychology, its apperception mass enriched by the heritage of epistemological criticism, has read back, as traits native to the 'stream of consciousness,' characteristics which could be discovered by studying thought in its logical and epistemological environment only; so that it is now equipped with a descriptive and explanatory account of the states and processes of consciousness, adequate in so many ways to meet the needs of a judgment process which insures real knowledge, that its claim to issue in logic becomes readily comprehensible and easily accredited.

The usual verdict that Locke's psychology is sound and his logic at fault has been challenged by Dewey, who interprets this as a reversal of the facts.<sup>1</sup> His interpretation is, in substance, based upon the disparity between Locke's success in contriving the furnishings of the inner cabinet, and his failure, logically consistent, to find any way to use them in the world of real knowledge. The implication is that his psychological facts are wrong, and the cabinet must be refurnished with a more portable outfit. It is an old story that Locke finds the

<sup>1</sup> Dewey, unpublished lectures.

materials of knowledge given in the simple, discrete units or ideas, which as such may not be called true or false; that thinking or judging is the conjoining of them, and that knowledge is the perception of the various kinds of agreement or disagreement among these ideas. However, Locke finally concludes that such knowledge is empty of real content; that thought in connecting ideas produces merely analytical, or trifling and verbal knowledge. The second definition of knowledge, implicit in the 'fourth kind of agreement,' namely, the agreement of the idea with reality, is an admission that the idea must be brought into connection with something outside of itself.<sup>1</sup> But the only place where this occurs is in sense-perception, and here Locke finds no function for thought to perform, since the only connecting involved is that of the qualities in the object, and these already "coexist in nature." We can say at the moment of sense-perception, and with conviction of real knowledge, "This gold melts," but here the connection is entirely given, and not at all the work of thought. The only function which thought may be said to perform is to record, or duplicate in simple or complex idea form, the reality completely present. However, when we say, "All gold melts," thought performs its office of connecting two ideas, but gives assurance of nothing beyond the coexistence of two ideas in the mind. In spite of the fact, then, that ideas are the materials of knowledge, they do not, when put together, yield knowledge worthy of the name. Nor has thought the power to refashion or reconstruct the simple idea any more than it has power to influence the 'constitution, order, or connection of qualities' in things. Thus, thought, manipulating such ideas as introspection seems duly to deliver as the units, or materials, of knowledge, is a self-inclosed process, operating futilely within a realm sharply delimited from reality.

Similarly for Berkeley, real knowledge occurs only at the moment of perception; for only at the moment of experiencing the conjunction of the 'ideas of sense' can we be sure of a connection between them. There is no genuine connection between or among them; their order may be changed at any time. Heat is not necessarily connected with fire, and the judgment which joins subject and predicate on the basis of a necessary connection is misleading. Fire and heat may go together as ideas of sense coexistently given in perception, but in that case thought takes no part. Nor can thought in its function of joining ideas

<sup>1</sup> Cf. Moore, *The Functional versus the Representational Theories of Knowledge in Locke's Essay* ("University of Chicago Contributions to Philosophy," III, No. 1), pp. 48-52.

of memory, or of imagination, reach knowledge. Ideas of this sort cannot be connected or synthesized into new logical or knowledge-wholes; nor can they be analyzed, indeed, into constituent elements, since they are already simple and irreducible givens, as irretrievably unique and separate in their occurrence as their prototypes, the ideas of sense. If carried on through the medium of the 'ideas' which Berkeley's introspection vouches for, thinking is an anomalous, if not superfluous, activity of the inner spirit.

With Hume, the thinking-process, reduced to a series of mental units, passing in rapid panoramic succession, has resolved itself into a continuously flowing stream. There is nothing to be synthesized except ideas, and these flow on, although there is no logical reason for their beginning or ending. There is the "gentle force" by which one idea calls another after it, but there is no real connection between them, that is, they form among themselves no logical unity. The mind is a succession of disparate ideas, and there is nothing to mark the beginning or end of association, nor is there any criterion by which to judge what grouping or bundle of associations constitutes a judgment. Hume finds that no 'combination, collocation or succession' of ideas results in a valid judgment. His substitute for judgment, belief, demands the joining of idea with impression. In some way thought must get away from mere ideas; the continuity of the self-inclosed process must be invaded. Knowledge constituted by the connection or conjunction of ideas, Hume, with Locke, deems trivial or purely analytical. Knowledge of the "relations of matter of fact" is the only knowledge worth while, but this involves the joining of impression with idea. However, idea may be connected with impression only by a "fiction" of the mind. Immediate perception, finally, in which for Hume there is no inference or work of thought—it, and it alone, affords knowledge. But even here, the object seemingly so completely present to perception is itself only a swift succession of impression units, which the mind by its make-believe blends into a permanent and self-identical whole. Knowledge, then, is confined to the moment of sensory impact, and thought, in rescuing us from the mercy of the passing moment, does so only by a falsification of reality. Thinking as made up of the continuous stream of discrete ideas, for whose existence, Locke, Berkeley, and Hume, as psychologists, found such convincing introspective evidence, is not only futile but falsificatory, since its only genuine power is that of a make-believe.

Hume's failure to square the facts of mind which he found, as

introspective psychologist, with the work which thought seemed to perform in the world of his backgammon-playing, common-sense experience, may be said to have had at least two results historically. On the one hand, this chasm between thought as continuity or narrative by itself, and the world of things, or the continuum of external objects formed a good basis for the independent development of psychology. Logical and epistemological questions as to the possibility and validity of knowledge, and of the relation of the thought-process to reality, could be shelved, and psychology could locate its inquiries strictly within the boundaries of the continuous succession of mental states. Skepticism as to the possibility of knowledge might flourish, but man could at least know what was passing in his own understanding. Introspection might be difficult, but given the requisite skill and perseverance, the human mind must at last yield to analysis. The long reign of associationism and the present-day achievement in structural analysis bear witness to the success of this method of introspective isolation.

The other result of Hume's separation of thought and reality led to the attempt by Kant to give an account of thought, which the empiricists by their rigorous introspection had failed to find. Skepticism had been the logical outcome of conceiving the materials of knowledge as completely given to a thought-process which had no power over them. Thus there resulted a thorough internalizing of the thought-activity and a consequent externalizing, to the point of complete alienation, of reality. Though it is the fashion at present to accord Kant small historical influence, it seems undeniable that he stamped in, past the possibility of effacement, a feeling for the intimate connection of thought and its object. Thought, knowledge, and reality are three terms which, since the time of Kant, it is no longer possible to consider separately. Despite the fact that ultimately he turned awry the current of philosophy from 'empirical reality' into transcendental channels, where thought became transfigured into Pure Reason, his insistence that thought organized its materials into the very world of reality, which for the empiricists was so completely given and external, and which thought, in its passive internality, faced so futilely, could not but change the mode of conceiving the mental processes.

The later English associationists as well as the German psychologists show this influence. Some feeling for a genuine thought-activity is evinced, in that there is an attempt to ascribe to thought some constructive power over its material. The category of attention is coming to the front. Attention makes the idea clearer, more distinct, gives it

greater duration, but these are not the only changes which it effects. Inasmuch as it holds the idea, that is, secures greater duration for it, it establishes 'interest,' and since interest determines the direction and number of associations, attention becomes responsible for, and thus has control over, the train of ideas which follow.<sup>1</sup> Further, the cognitive unit seems to be no longer the ideas of 'simple and uniform appearance' of the Lockean type, deriving its simplicity and uniformity *from* its objective prototype. The unity of mental content appears, rather, to be determined by the 'span' of attention. The growing emphasis upon the problem concerning the number of objects to which the mind can attend at one time is significant of a marked change in the conception of thought. It is a step in the direction of regarding any moment of consciousness as unitary, whatever its content, rather than as made up of units, synchronously or successively combined, and further, of according to thought power over its material. For though the later English associationists continue to explain an object as a complex of ideas, due to inseparably associated impressions, yet the original unification of the impressions into the object is made to depend upon the capacity of attention to select, and organize, and hold within its span, a certain number of impressions. In other words, thought is brought into closer connection with reality through its power of selective control.

The apparently simple admission of the selective aspect of the mind continues for some time to be a source of difficulty to a psychology which, as a lineal descendant from the psychology of Locke and Hume, is fearful of making the mind an entity over and above its ideas, and of ascribing to it occult faculties which elude introspective verification. Early attempts to do justice to the attention phenomena led in psychological practice to a dualism between mind and idea. Attention was treated as a sort of process outside the content of the idea, and as such, was apt to recede upon close scrutiny into the sheltering folds of 'mind,' leaving the idea with its traditional passivity. Yet the psychology which equated mind with ideas could no longer regard the idea as merely the passive recipient of its content, however introspection might be baffled to discover manifestations of activity within it. The bipartite-tripartite controversy as to the existence of activity as a distinguishable element of consciousness followed in the wake of the emphasis on the attention category; for attention as voluntary control was generally regarded as the activity aspect of consciousness. Both bipartitists and tripartitists were 'structuralists' in that they

<sup>1</sup> James Mill, *Analysis of the Human Mind*, II, 367-70.



agreed that activity must reveal itself as an element within, and not a somewhat, mysteriously outside of, the mental content under examination. The persistence of the activity quarrel was evidence of the genuineness of the difficulty of discovering such an element by introspection. The challenge of the bipartitist to find activity as a distinctive element in consciousness was met by the countercharge of the tripartitist that his adversary was guilty of the psychologist's fallacy. The bipartitist, that is, assumed that the bit of consciousness under examination represented a complete moment of consciousness, when it ought to have been evident that the original activity had, at the moment of introspection, shifted its center of gravity to the psychologist as spectator.

The bipartitist, as rigorous introspectionist, especially as he leaned toward the interpretation of psychology as a science and relegated the problem of activity to metaphysics, seemed to hold the fort. However, even he found it necessary to qualify his position and make concessions. He began to find it convenient to talk in terms of process as well as of content. The fact that the idea changed and shifted under the survey of the introspectionist was finally accepted as evidence of its dynamic, or active, or, according to the earlier usage of the term, its *functional* character. The dynamic character of the idea, then, was its capacity to change within itself, to wax and wane as idea, and to flow insensibly into the passing stream. With this compromise, thought could be designated as active, and its activity could be regarded as a structural attribute of the idea. But the tripartitist was not content with this disposition of the matter, for he insisted that activity meant something more than the mere structural instability of the idea.

It is only with the introduction of another conception that the quarrel between the bipartitist and tripartitist bids fair to become adjusted and that is with the characterization of thought as motor. The presence of the idea *is* attention, but, further, if the idea holds the field, it issues into action. The idea is active, then, but its activity is no longer that of bringing in its train a troop of associates, nor yet is it dynamic merely in the sense allowed by the orthodox structuralists of a 'process' of inner change. Idea is motor in tendency; it leads to overt activity. The idea with its motor tendency, finally, is regarded as the cognitive unit, and the activity is no longer a mysterious *tertium quid* of consciousness, but finds representation within the idea itself.

The advance from the characterization of the idea as passive, (1) to the description of it as dynamic, with control over its own sequences, and (2) to the conception of it as a selective, adaptive process, which,

no longer shut up to internality, issues in overt activity, is of far-reaching consequence not only to psychology but to philosophy. The idea, so conceived, is pointing out of the realm of merely mental states to a world beyond; it gives promise of being an adequate tool for securing knowledge, valid and real—a combination which the idea of the associationist could never achieve. Further, this tendency to activity is not at random or uncontrolled; it is not a process supervening, like an arbitrary fiat, upon the idea, but the *specific* nature and direction of its activity is precisely an intrinsic attribute of the idea itself. Closely connected, that is, with the conception of thought as motor is that of the specifically purposive and adaptive nature of this activity, first in the more palpable biological sense of adapting organism to environment, and then in the more subtle sense of overcoming any obstacle to direct and unimpeded procedure. Thus, thought occurs when an activity, previously operative through the mechanism of habit or instinct, is for some reason inhibited. Its function is to effect such an adjustment that activity may again be resumed. In other words, thought is “teleological”—headed toward an end other than itself.

It is at this point in its history that psychology claims to be one with the logic which finds in any felt inadequacy of experience the occasion for the occurrence of thought, and which delegates to thought the function of so resolving the doubt or ‘tension’ into which a situation has fallen that through its instrumentality experience is reconstructed and reintegrated on a new level. This type of logic, moreover, views thought as occupied, not with a reality which lies behind a perpetually retreating horizon line, where it merely *appears* to meet experience, but with a reality accessible to, and located within, the practical act of judgment, and as concerned with a criterion of truth established within the limits of such reality. But this interpretation of the nature of truth and the function of thought, the psychologist maintains, makes the problem of logic coincident with that of psychology. Angell says:

Unless one regards the cognitive function as a mere luxury of the organism, it is difficult to see how one can escape from the view just presented. If the knowledge processes are of value to the organism, it obviously must be because of what they do. No one questions that they serve to reflect and mediate the external world, and this they can only do effectively provided they distinguish the true from the false. It would seem fairly clear, therefore, that a functional psychology in any event, however the case may stand with a structural psychology, cannot possibly avoid a consideration of this aspect of the

cognitive activities. But the problem to which this view leads is essentially identical with the accepted problem of logic.<sup>1</sup>

Psychology, indeed, would seem to have the right of way, for it is now equipped with a cognitive unit which can be stated satisfactorily as content or structure, belonging to the inner continuum, or as activity, which goes forth into the world of practice and effects adjustments therein. Thus provided, psychology can without apparent break in the continuity of its development, or essential change in viewpoint, become one with logic.

The question, obviously, is whether the psychologist can discuss thought as it goes about its business with reality. Can this be done from the standpoint traditionally distinctive of the psychologist, that of viewing thought as "reflecting and mediating an *external* world," to which adjustment is to be made? If psychology essays to discuss, under the caption of "right adjustment," the situation in which thought connects with reality at first hand, several problems confront it which heretofore it has been content to regard as out of its province. It has deemed it sufficient to trace the career of the idea to the point where it dominates in consciousness. Frankly adopting as a working hypothesis the standpoint of the dualism of thought and thing, its interpretation of thought remained within those limits. James says of the psychologist's attitude: "The dualism of Subject and Object and their pre-established harmony are what the psychologist as such must assume, whatever ulterior monistic philosophy he may, as an individual who has the right also to be a metaphysician, have in reserve."<sup>2</sup>

The psychologist's assumption with regard to cognition James states, further, is a thoroughgoing dualism.

It supposes two elements, mind knowing and thing known, and treats them as irreducible. Neither gets out of itself, or into the other, neither in any way *is* the other, neither *makes* the other. They just stand face to face in a common world, and one simply knows, or is known unto its counterpart. This singular relation is not to be expressed in any lower terms, or translated into any more intelligible name . . . . the knowledge is constituted by a new construction that occurs altogether *in* the mind. The thing remains the same whether known or not.<sup>3</sup>

If psychology is really to assume the task of logic, it can no longer

<sup>1</sup> "The Relations of Structural and Functional Psychology to Philosophy," *University of Chicago Decennial Publications*, First Series, Vol. III, Part II, p. 13 (page reference is to monograph reprint).

<sup>2</sup> *Principles of Psychology*, I, 220.

<sup>3</sup> *Ibid.*, pp. 218-19.

leave the idea standing on the brink of such a precipice; it must bridge this chasm to reality. It is at the point at which reality and idea are alleged to stand face to face in a common world, that the logical problem becomes crucial. It will not suffice for logic to take for granted that the new construction which "occurs altogether in the mind" holds of reality, or to show thought as a Lady of Shalott's mirror in which *external* reality is so reflected by some pre-established harmony that it leads to *right* adjustment. A logic which professes as its creed a belief in the possibility of knowledge must meet the challenge to show how the idea as predicate can come into relationship with reality, in such a manner that the result is not a merely mental reconstruction, or one which leads to a new adaptation *to* reality, but is, rather, a reconstitution of reality itself.

To meet such a demand psychology must make a radical revision of its dualistic premise and so far forth adopt different data. The history of philosophy shows the folly and fallacy of attempting, through any subsequent compromise, to establish the relation between things which by the very definitions adopted at the outset preclude the possibility of any connection. And the psychologist who bases the possibility of his science on the assumption of the differentiation of thought and things separates them as irretrievably as did the Cartesians and Occasionalists by explicit definition. Psychology cannot take the idea, characterized and interpreted from the standpoint of an initial dualism, and proceed to establish its relation to reality in a manner satisfactory to instrumental logic. Yet were psychology to attempt to reduce thought and things to a common denominator it would lay itself open to the charge of wantonly interchanging the categories of thought and being, or it would be obliged so to reinterpret its fundamental categories as to imperil its identity with any recognized form of psychological discipline.

Functional psychology characterized thought as motor and adaptive. Inevitably another characteristic arises which must give some pause to the psychologist. Thought is occasional; continual, not continuous. When thought's work is done, and the specific need for which it is called out is fulfilled, it disappears. If the psychologist accepts this aspect of thought as a corollary of the motor-teleological characterization, he must revise his description of thought as a stream. Must he not, indeed, change his view of thought as subjective continuity? It is, to be sure, a seven-league stride from the associationists' account of thought as a stream of mechanically determined sequences of mental events, to the

conception of thought as a purposive and genuinely developmental continuity, of which Angell gives so forceful a description.

“Each idea springs out of other ideas, which have gone before, and in turn gives birth to new successors. The connection is not merely one of sequence in time; it is a connection of the genuinely developmental type, in which one idea is, as it were, unfolded from, and given off by, another.”<sup>1</sup>

Yet, in spite of the difference between these two positions, there is a fundamental similarity, which is doubtless a distinguishing mark of the psychological standpoint. In both cases thought is a continuous realm in itself. It is a process having its own law of ebb and flow, and one which never leaves the level of its own continuity to invade a reality outside of it. This has been shown to be true of associationism, but it is none the less apposite to the more modern conception. For the interpretation of thought as developmental in this sense, whereby one idea grows out of, and into, another, is a sort of Weissmanian germ-plasm theory of thought. The idea, so to speak, cannot acquire reality characteristics from its environment, nor can it transmit such characteristics if acquired—development is entirely from within. There is no intention here of urging anything in criticism of this view. It is doubtless a consistent and legitimate reading of the facts from the introspective vantage-point as determined by the psychologist's premises. But idea, as offspring of this continuity-of-thought plasm, is unfitted by its inheritance, for the service into which logic would press it. The characteristics with which logic invests the idea betray a different lineage from that accorded to it by the psychologist.

The conception of thought as a continuity of mental states or processes, inestimably productive of explanatory and descriptive results as it has been, and authentic as it may be from the retro-introspective standpoint, must be abandoned as inadequate to explain the function of thought as instrumental logic would portray it. In the interest of a logic which ascribes to thought, not the function of copying, or reflecting, or representing an *external* reality, but that of penetrating, manipulating, and refashioning reality so that thought is to be regarded as the “characteristic medium of the activity”<sup>2</sup> of reality itself, the existence of thought as inner or subjective continuity must be denied. Thought appears to be one aspect of a larger experience, which only on occasion reduces to a thought experience. Dewey says: “Taking some part of the

<sup>1</sup> *Psychology*, chap. x, p. 265.

<sup>2</sup> Dewey, *Studies in Logical Theory*, p. 43, footnote.

universe of action, of affection, of social construction, under its special charge, and having busied itself therewith sufficiently to meet the special difficulty presented, thought releases that topic and enters upon further *more direct experience.*"<sup>1</sup>

Nor is the subjective continuity of consciousness to be kept inviolate by translating "more direct experience" into terms of feeling or emotion, so that the gaps between 'thoughts' may be filled up. The psychologist, however, reading off all experience in terms of personal consciousness, must make just this translation or be accused of talking nonsense. The interpretation of thought (or consciousness, *since all consciousness as adaptive* is so far forth cognitive) as forming one beat in the rhythm of experience, whether or not it be the accented one in which all others get representation, offers difficulties to the psychologist, and especially to one who retains the conception of thought as inner continuity.

Physiological psychology comes to his aid to some extent in making the conception of thought as 'occasional' a possible one for psychology consistently to hold. The challenge to tell where an idea was when it was no longer 'in the understanding' could not be met by earlier psychology. Physiological psychology has made possible an explanation by giving the idea cortical representation, so that the cells, functionally active in the presence of the idea, conserve the idea when absent, by way of organic habit, and thus make possible its revival. But this hypothesis, beyond explaining the physiological and neural conditions of the phenomena of consciousness, does not meet the situation which the psychologist is forced to face if he undertakes the logical problem. For the psychologist who ventures to discuss thought as something more than a concomitant of physiological and neural conditions, at any rate, for one who attempts to deal with consciousness in its capacity to connect with 'things' and effect differences in them, the fact that thought is one aspect of experience, and not coincident with it, is an awkward affair to handle. To tell what becomes of thought as adaptive consciousness when it has ceased to operate and to discuss "direct experience" in terms other than that of personal habit or consciousness would seem to drive psychology to a study of thought, *not from the point of view of finding its origin, and principle of conservation, within an 'individual' 'psycho-physical organism,' but rather as arising from, and transforming into, reality itself.*

Further to satisfy the demand of logic, psychology must show not only that thought thus connects with things, that is, that it has objective

<sup>1</sup> Dewey, *op. cit.*, p. 2 (italics mine).

validity, but also that the 'right adjustment,' which thought brings about, is universally right. In other words, if truth is to be identified with successful adjustment, it must have a validity beyond the individual. But logic can make out no case for the extra-individual validity of the truth which thought achieves, no matter how social the content of that thought may be, if in the first place thought is characterized as always personal—'your' thought and 'my' thought. Such adjustments as it effects must always be in the field of 'personal' behavior or habit toward reality, and such reconstructions as it accomplishes must occur wholly in 'my' mind. Yet the conception of thought as personal is certainly a basal assumption of psychology, and to discard it would be to require such a revision of the limits and boundaries of the "individual" as to make it no longer identifiable with the field of investigation which psychology has heretofore pre-empted.

Whatever psychology decides as to the possibility or the advisability of re-editing its categories to meet these demands, it seems fairly evident that there are different standpoints involved in the conception of thought as continuous stream with substantive and transitive states, and thought as occasional in occurrence; in thought as 'personal,' the possession of the individual as such, and thought as the 'medium of the activity of reality.'

If psychology can give an account of the judgment process which possesses all the perquisites which logic finds necessary in order to make out a case for the possibility of knowledge, then logic and psychology are one, and the name is a matter of indifference. But if the 'idea,' as psychology describes it, cannot be put to work in the judgment because the consequences would be fatal to a logic which attempts to show thought as instrumental in securing truth that is not lacking in objectivity, permanence, and universality, then the problems of logic and psychology are not identical.

## CHAPTER II

### THE IDEA IN PSYCHOLOGY

If psychology and logic are identical, psychology must make out such a passport for the 'idea' that it may travel without obstruction into, and out of, the country of reality. The idea as predicate must so connect with reality as subject that the judgment, in achieving new knowledge, shall achieve new reality; for instrumental logic insists that thought is not a discursive activity operating *between* two realities as limits and fetching up with a newer approximation *to* reality. The judgment process as an analytic-synthetic activity must not be an analysis of mere concepts, therefore, nor a synthesis of mere thought-relations. But for psychology to attempt such an exposition of the judgment is to find itself entangled in the antinomies of thought and being, with the reduction of the latter to the former as the inevitable outcome. It is because instrumental logic has been commonly supposed to adopt the 'idea' as the psychologist has made it known, that these strictures have been made against its metaphysics.

The psychologist's problem, then, of supplying a cognitive element that shall stand as comember with reality in the judgment is met by the differentiation of the idea into two aspects, image and meaning. The distinction between the idea as specific mental content, and as general or abstract notion, is virtually as old as the dispute between nominalism and realism, but the inclusion of the two aspects within one and the same mental state is a compromise, which is to be credited to recent psychological development. Ideas are no longer classified out of context, as particular or general, abstract or concrete, but every idea is a concept, which as image is a specific mental 'event' or 'existence,' but which as 'meaning' transcends the limits of that particularity. Further, idea as image belongs to the traditional stream of inner happenings; as meaning, it looks beyond the boundaries of that subjectivity. Finally, the idea as image is a fleeting, nonrecurrent existence, but meaning is the permanent and universal thought-content. Meaning, that is, may be invoked by the psychologist to give to the idea the attributes of objectivity, universality, and permanence, thus rescuing it from the subjectivity, particularity, and instability to which it is doomed by virtue of its habitat in the inner stream. A consideration of the idea as the psychologist differentiates it into image and meaning will lead to the



heart of the problem; it will reveal the nature of the relationship which, according to psychology, the idea sustains toward reality, and will afford a clue, consequently, to its value as an instrument of knowledge.

In spite of the recognition of image and meaning as complementary phases of the idea, psychologists do not, as yet, always use the term with rigorous precision to cover both. Idea sometimes designates the image alone, or 'meaning' in contradistinction to image. Where the two are specified, however, 'idea' signifies a mental state into which both enter as necessary elements; the idea "must include an image, but it must also include whatever notional fringe serves to give the image meaning and significance."<sup>1</sup> Another usage is that which construes image and meaning, not primarily as constituent parts of one whole, but rather as different aspects which a specified mental content takes on according to the standpoint from which it is viewed. Angell says: "Images and ideas do not refer to two different states of consciousness, but to one and the same state, looked at now from the side of sensory character and antecedents, now from the side of meaning."<sup>2</sup>

However, this interpretation may safely be said to be one with that which regards image and meaning as mutually constitutive of the cognitive moment, for Angell states further that "so far as in our descriptions we have in mind the *sensuous content* of a thought, e.g., its visual or auditory character, we use the term image. So far as we wish to emphasize in addition to, or in distinction from, this fact of sensuous constitution the purport, significance, or *meaning* of the image, we use the term idea."<sup>3</sup> The possession of such a cognitive unit, obviously rich in implication, and flexible of application, is at once a valuable resource and a subtle danger to psychology, inasmuch as it offers cover for ambiguities and inconsistencies.

Concerning the structural nature of the image there is fairly definite agreement. It is usually characterized as having a content of sensory *quales*, which are the centrally aroused counterparts of sensation. It is, moreover, the unique, the peculiarly unsharable, and personal mental state of the psychologist's individual. 'Meaning' is used variously: first, to designate the transitive moment in the stream of thought, the conscious correlative of the process of melting and decay of one image into another—the vague emotional awareness of the whence and whither of the thought movement. As James puts it:

<sup>1</sup> Baldwin, *Dictionary of Philosophy and Psychology*, article "Notion," p. 184.

<sup>2</sup> *Psychology*, chap. viii, p. 201.

<sup>3</sup> *Ibid.*

*The sense of our meaning is an entirely peculiar element of the thought.* It is one of those evanescent and 'transitive' facts of mind which introspection cannot turn round upon, and isolate and hold up for examination, as an entomologist passes round an insect on a pin. In the (somewhat clumsy) terminology I have used, it pertains to the 'fringe' of the subjective state, and is a 'feeling of tendency,' whose neural counterpart is undoubtedly a lot of dawning and dying processes too faint and complex to be traced.<sup>1</sup> Here 'meaning' is not for the psychologist a cognitive distinction, however he may regard it as the feeling or emotional matrix out of which cognitive distinctions may issue. As something over and above the image, it yet has no distinct reference beyond the stream of mental events. 'Meaning,' in a second use of the term, signifies not merely the transitive, onward-flowing, continuum character of thought, but rather its motor aspect, that is, the readiness or tendency to response for which the image stands as specific stimulus. The psychologist, however, classifies this aspect of consciousness, when he has occasion to refer to it specifically, rather under the category of impulse than that of cognition. A third use serves to indicate a distinctively cognitive content and function, namely, the capacity of the idea to refer to things, or to have object import. Finally, 'meaning' may denote the completely organized conceptual content or product of thought's activity.

The psychologist finds that, in order to convert the idea into an acceptable logical tool, it is hardly sufficient to affix to the idea 'meaning' in the first sense, for, although the latter supplies thought with a dynamic attribute, it still keeps it a "subjective state." For this reason, there is usually coupled with image 'meaning' in the sense last enumerated. 'Meaning' as the non-temporal content of concepts which remains what it is in spite of the vagaries and idiosyncrasies of the stream of images that think it—here surely is to be located the saving element of thought, which makes for the possibility of universal and permanent truth. At least so runs the argument of absolutistic logic, which severs without compunction just these two aspects of thought, and denies, moreover, the possibility of ever yoking them together in any genuine logical relationship.<sup>2</sup> Idea as psychic occurrence, it relegates to psychology as an irreducible surd, and hands over to logic, as alone relevant and essential to the judgment function, idea in its 'meaning' aspect.

However, the psychologist who does not agree to such a division of

<sup>1</sup> *Principles of Psychology*, I, 472.

<sup>2</sup> Bradley, *Logic*, chap. i, especially pp. 1-10.

labor must set about to show how these constituents of the cognitive moment may come into organic connection with each other. Whether he sees fit to work out the details of the explanation or not, he must leave the way open for the exhibition of the close interconnection, intrinsic and internal, of the peculiarly individual with the universal and objective aspect of thought. The psychologist would doubtless find ready answer to such a demand by pointing to his genetic account of the reciprocal growth and contemporaneous development of percept and concept. Yet, even this does not meet the crucial issue. Both percept and concept as mental contents, regarded as the possession of the individual, might still be denied objective validity. To satisfy the demand which instrumental logic means to meet, namely, that thought's activity must result in objective values, psychology must be in a position to show that 'meaning' as objective reference (cf. the third usage enumerated), whether universal or particular, and image, which as unique psychical existence, is that which, for the psychologist, makes thought essentially 'my' thought, co-operate in the judgment. Otherwise there is danger of leaving the whole machinery of individual thinking unaccounted for in the knowledge content, and logic ends in the cul-de-sac of skepticism—with the insoluble problem of how thinking as 'purely and simply an inner movement of our own mind' can claim to issue in knowledge of reality except by way of a pre-established harmony between thought and things. The image thus occupies a strategic position. Some psychologists, to be sure, have denied altogether the necessity of imagery for thought, but this does not affect the question under consideration materially, for we are concerned to find just what the function of the image is, for those psychologists who recognize it as a necessary factor in the cognitive moment. But even if the exponents of imageless thought had not been effectually refuted by psychologists on their own ground, they have what is equivalent, for our purposes, to the psychologist's general view of the image, e.g., a peculiarly unsharable mental state, be it a 'noetic-form' or a motor 'attitude'—the machinery in which, and through which, thinking goes on. Among the psychologists who insist on the close connection between image and meaning, we find that to the image is ascribed the lesser functional importance. Thus James says:

Such an alteration of my meaning has nothing to do with any change in the image I may have in my mental eye, but solely with the vague consciousness that surrounds the image, of the sphere to which it is intended to apply.<sup>1</sup>

<sup>1</sup> *Principles of Psychology*, I, 473.

. . . . When I use the word *man* in two different sentences, I may have precisely the same sound upon my lips and the same picture in my mental eye, but I may mean, and at the very moment of uttering the word and imagining the picture, know that I mean two entirely different things . . . . the image, *per se*, the nucleus, is *functionally* the least important part of thought.<sup>1</sup>

Not only, then, does James regard the image as of less importance than meaning, but he seems to leave it without intrinsic connection with meaning. One image may be the bearer of two "entirely different" meanings. With the change from one meaning to another, the image may remain identically the same. If an image can carry two meanings while it remains the "same," what is to limit the number of meanings it may carry? Why may not the meaning get so far ahead of the image as to leave it behind? If one and the same image will do for two entirely different meanings, why any imagery at all? "The reader sees," says James, "by this time that it makes little or no difference in what sort of mind-stuff, in what quality of imagery, his thinking goes on."<sup>2</sup> The image thus seems to make no difference in the thought-content; it has therefore no integral function in the knowledge moment. However, though the image seems to have no function in the change or development of meaning, it is noteworthy that meaning changes the image. "This added consciousness" James regards as an "absolutely positive sort of feeling, transforming what would otherwise be mere noise or vision into something *understood*; and determining the sequel of my thinking, the later words and images, in a perfectly definite way."<sup>3</sup>

If meaning does "determine the image," why does not the change in meaning from man to Smith effect some change in the image? And what intrinsic importance or function can an image, which does not keep tally with the developing meaning, have in the conclusion of the thought? "The only images *intrinsically* important," we are told, are "the halting-places, the substantive conclusions, provisional or final, of the thought. . . . The parts of the stream that precede these substantive conclusions are but the means of the latter's attainment."<sup>4</sup>

How, on this account, must the concluding word or phrase be translated into its full sensible-image-value, under penalty of being unrealized and pale? James says of this concluding image: "It need only be added that as the Algebrist, though the sequence of his terms is fixed by their relations rather than their several values, must give a

<sup>1</sup> *Principles of Psychology*, I, 472.

<sup>2</sup> *Ibid.*, p. 269.

<sup>3</sup> *Ibid.*, p. 472.

<sup>4</sup> *Ibid.*, pp. 269-70.

real value to the *final* one he reaches; so the thinker in words must let his concluding word be translated into its full sensible-image-value, under penalty of thought being left unrealized and pale."<sup>1</sup>

How does the image in the conclusion differ from any other? Why does not this image go on pointing to still other meanings, why is it alone fitted to overcome the pale cast of thought and bring it into touch with reality. If image is of so little importance in its everyday place in the stream, how does it effect the magical result of such a transformation in the conclusion?

Angell makes no explicit statement as to the relative importance of image and meaning. He says of the image:

It is the psychical device by which we are enabled consciously to focalize upon our acts the lessons of our previous relevant experiences, and through which we forecast the future in the light of the past.<sup>2</sup> . . . . It is the image which affords us the method whereby we shake off the shackles of the world of objects immediately present to sense, and secure the freedom to overstep the limits of space and time as our fancy, or our necessity, may dictate.<sup>3</sup> . . . . If I wish to express some proposition with the greatest force and clearness, I go about it by calling into my mind auditory-motor word images.<sup>4</sup>

The above passages certainly attribute a large place to imagery, but other statements reveal the same tendency, shown in the citations from James, to regard the specific character of the image as indifferent: "But provided that, in our use of an image, we recognize it as *really* symbolizing the *class*, and not an individual, and use it, *intending* it to accomplish this purpose for us, it is a matter of indifference what special kind of imagery we happen to employ. . . . ."<sup>5</sup>

Citing further, we find *not* only that one image may be the bearer of meanings signifying two entirely different things, but also that different images may be bearers of the same meaning.

But how is it that we can think about the *same* things when the *content* of our thought is so different? The content of our thought is, so far at least as concerns the knowledge process, always made up of imagery. Today this may be largely auditory and verbal, tomorrow largely visual. . . . . But provided I use the different image to stand for the same meanings on the two days, I shall come out perfectly well and my thought will unquestionably have been about the *same* object and its relations. Thus it comes to pass that, although we never have literally the same image twice in our consciousness, we nevertheless can think the same meanings again and again.<sup>6</sup>

<sup>1</sup> *Principles of Psychology*, I, p. 271.

<sup>4</sup> *Ibid.*, p. 219.

<sup>2</sup> *Psychology*, chap. viii, p. 219.

<sup>5</sup> *Ibid.*, chap. x, p. 252.

<sup>3</sup> *Ibid.*, p. 217.

<sup>6</sup> *Ibid.*, p. 253.

Image, the "stable psychic fact which we can hold still and look at as long as we like," has apparently no intrinsic function in the changing, developing meaning, but just as evidently its specific quality is indifferent in the realm of unchanging meaning. As mental event it becomes a symbol, albeit an indifferent and not an indigenous one, of meaning. Indeed, it is given just the status which Bradley accords the idea as a bit of psychical stuff. "Mental event," he says, "is unique and particular, but meaning in its use is cut off from the existence and from the rest of the fluctuating content. It loses its relation to the particular symbol, it stands as an adjective to be referred to some subject but indifferent in itself to every special subject."<sup>1</sup> But we have pointed out that it is this interpretation of the relation of the image to meaning which opens the way to a clean-cut division between logic and psychology.

In summary we note, first, the insistence of the psychologist upon the organic relationship between image and meaning, then the gradual stripping-off of the functional significance of the image; with James the image is "functionally of least importance" and the stuff of which it is made is of no consequence; with Angell the image is a symbol but its specific character is a matter of indifference. Further, the image possesses no peculiar characteristic which makes its function unique, that is, which makes it the bearer of this, rather than of that, meaning, for not only does it appear that one image may carry two meanings, but, obviously enough, different images may symbolize the same meaning. Its structural and anatomical make-up thus has no intimate influence on meaning either as a growing, changing, dynamic thing, or on meaning as realm of organized concepts. The image is thus practically denied a place in the cognitive function. The reasons for this shutting-out of the image from the knowledge function are interesting. On the one hand, image is the unique, the psychical, the transitory element of thought; it is too unstable to serve as a knowledge tool. Knowledge must be characterized by permanence and objectivity; we must be able to mean eternally the same. Concepts which do not change into each other are the stuff of which knowledge must be made. On the other hand, image is the 'brute' existential fact of sensuous content; it stays fixed—you may turn it round on a pin and view it as the entomologist does the transfixed butterfly; it is too inflexible to lend itself to the growing, moving, developing cognitive content. Now, curiously enough, it is the meaning which is the evanescent, the changeable and elusive, the diaphanous medium of change and development,

<sup>1</sup> Bradley, *Logic*, p. 7.

and the image, unstable and transitive existence that it was found to be, is too fixed and permanent. The antithesis we have here thrown into high relief doubtless seems forced, but these two attitudes toward the image are unmistakably present in psychological 'explanation and description.' Each in its own way has a justification, but when combined uncritically, as if tenable from one and the same standpoint, and pressed into the service of logic, the result is an insoluble knowledge problem.

It is not to be gathered from the letter of any one passage that this robbing of the image of all cognitive dignity is intentional, but the cumulative effect is undoubtedly that of lessening, to the point of negligibility, the image function. Yet, as if by way of compensation, the image is granted an indispensable rôle in the account of those cognitive activities which involve a direct attitude toward reality. Sensorial attention, perception, discrimination, simultaneous association are all impossible without the image. Indeed, the image would seem to be the *sine qua non* of apprehending experience in its form of existential reality, or more simply, of becoming aware of "particular material things present to sense." In attention, for instance, there is the ideational preparation in the form of an image of what one is expecting to hear, see, etc. The presence of the image, the psychologist tells us, constitutes just the attitude of attention. In discrimination, the image is necessary if I wish to select, to differentiate from its context, to isolate, in short, to make an object stand out as having independent existence as a thing. In these instances the image seems to be present as a fairly explicit form of "figured consciousness." In perception, too, the image plays a part. In Sully's words, "perception is that process by which the mind supplements a sense impression by an accompaniment or escort of revived sensations, the whole aggregate of actual and revived sensations being solidified and integrated into the form of a percept."<sup>1</sup> Titchener likewise defines perception as an "interpretation of sensation,"<sup>2</sup> that is, it is the response through a centrally aroused ideational escort, or imagery, to a given sensorial content. Perception of "particular material objects present to sense," thus, is not a compound, or an aggregate, of given sense qualities, but involves imagery, and from the psychologist's own account, the amount and kind of imagery marks the difference between correct and illusory perception. But if the psychologist considers the image an indispensable condition of cognizing reality in its immediate perceptual form, the image equally represents

<sup>1</sup> Sully, *Outlines of Psychology*, chapter on "Perception."

<sup>2</sup> Titchener, *Primer of Psychology*, chapter on "Perception."

reality when it is 'absent to sense.' Angell defines the image as "the consciousness of particular material objects absent to sense." The image, that is, besides being the precondition of coming into relation with reality present to sense, remains the representative of reality when it is absent. Further, it is the idea as image which the psychologist makes the forerunner or immediate stimulus to an overt response, and is therefore the condition, so to speak, of future connection with reality. The psychologist thus seems to make the image nothing less than the individual's point of contact with reality, present, past, and to come. Under such circumstances to deny the image a decisive place in the cognitive function would bid fair to leave knowledge without connection with reality.

If "all consciousness is figured" with this kind of stuff, the logician, at any rate, thinks that the particular pattern of the figure ought to make a pretty vital difference; the subtlest difference in the figure ought to mean a corresponding difference in the relation of the individual to reality and hence to knowledge.<sup>1</sup> Yet we pointed out the negligible part the image played in the higher cognitive processes. The image gradually degenerates; from the intimacy of its direct connection with reality, it becomes a substitute or representative of reality. As such it is the stable substantive thing that stays for observation; it is the 'copy' image. Then its reality juices are further squeezed from it by making this substitute merely 'my' copy of reality. Reduced thus to a mere

<sup>1</sup> Such paragraphs as those of Angell's (cf. *Psychology*, chaps. vi, xx) on perception as developed habit, and on the growth of voluntary control, which show that *pari passu* with the experimentation, elimination of unnecessary movements, and reinforcing of successful ones, the idea is undergoing a similar dialectic until the idea, as cue to action, represents on the mental side the organization which the habit does on the physical, is the nearest approach by psychology, that I know of, to just this demand of logic. The problem of how action follows thought is made more manageable for psychology by restating it in these specific terms, rather than by keeping it in its general form; for if every idea is found to be genetically bound up with *this* or *that* specific reaction, the final, or the 'concluding' image, is necessarily the precursor of just *this* response and no other. Every act which follows from an idea, that is, which can be called a conscious act, is in the last analysis ideo-motor; and the motor half of this partnership *is* the habit, built up genetically of just *this* idea. However, even if psychology were to reinterpret the place and function of the image with reference to the "higher cognitive" processes consistently with the implication of this genetic account, there would be the further problem for logic of how the idea which is bound up with the growth of habit—both with its break-up, or inhibition, and with all stages of its organization—can have validity beyond the personal limits of the habit of the psychologist's individual. This point is considered in chaps. iii and v.



psychical existence, its only reality is that of a bit of fleeting mental stuff, which by some miracle of survival retains the function of a 'symbol' of reality meaning. The image is thus given a position somewhat similar to the 'sensation' of the associationists. According to the associationists an object was an aggregate of sense qualities, and these, as simple and unitary, were discrete impressions. To give them body and to carry them out of the flatland of sense impression into a third dimension of permanence and self-identical 'thinghood,' it was necessary to add an 'unknown somewhat,' or 'substance,' or 'fiction' of the imagination. Now the psychologist, although apparently making the image the counterpart of sensation, really does not do so. He places it rather on the level of complexity with perception; he speaks of it as "the consciousness of particular material objects absent to sense." There appears to be no such thing as an image of red, or hot, or cold; an image of such a simple sense quality turns out to be a conceptual affair. (The after-image is not an image in the sense we have been using it but is rather a sensation.) Perception, we said, the psychologist defined as the 'interpretation of sensation' and not as an aggregate of sense qualities all equally present, and the image as analogue of perception, representing the object absent to sense, is not made up of sensory *quales* all given on the level of psychic existences. However, when the image is thus thinned out, 'meaning' must in some way be superimposed, in order to direct thought out of the internal panorama of mere "scene and counterfeit" into a world of reality.

Turn now to the more important rôle which *meaning* is alleged to play in the knowledge function. Here, if anywhere, psychology should show how thought deals with reality at first hand—should reveal knowledge in the making. In the judgment process, psychology should have ample opportunity to exhibit 'meaning' as that vital element, over and above the image, which makes for valid knowledge. But the psychologist's treatment of the judgment—we hold that it is a thoroughly adequate one from his standpoint—at once translates the process into a manipulation of concepts. To quote from Angell's succinct account:

In the judgment, "the book is heavy," we have the *concept* heavy united with the *concept* book. On the other hand, in the judgment, "the book is not heavy," we have the concepts apparently sundered from one another. Even in this case, however, it is obvious that in the mental state, of which the judgment is the expression, the two *ideas* were together, as truly as in the first case.<sup>1</sup>

<sup>1</sup> *Psychology*, chap. xi, p. 269 (first two italics mine).

Citing further:

So far as we predicate anything of an object—for example, “iron is a metal”—it may be said that we have simply *dissected the idea* of iron (our concept), which was already present to our minds, instead of adding some *new* idea, i.e., metal. Taken literally, this is a true statement of the facts. It is only false by virtue of that which it fails to add. . . . Judgment is, then, in its most explicit forms undoubtedly a process in which we synthesize concepts in the course of noting and asserting relations.<sup>1</sup>

In the above passages there is no intention of stressing the fact that the author seems to make judgment subsequent to concept. This he certainly does not do, for he gives a comprehensive account of the genetic relationship of concept and judgment, in which he points out that if genetic priority is insisted upon, it must be accorded the judgment,<sup>2</sup> but that judgment and concept develop contemporaneously rather than in serial order. Our concern is with the definition of the judgment as a *synthesis and analysis of concepts*. Is there a development of knowledge as the result of this synthetic-analytic activity? James says: “No one of them develops into any other. But if two of them are thought at once, their *relation* may come to consciousness and form matter for a third conception.”<sup>3</sup> Similarly Angell states that the concepts which we unite are with equal certainty already elements of our stock of knowledge, and we may seem to have made no gain by the judgment, much less have added a *new* idea to some old idea. But the gain is often very real, because the synthesis may bring out relations which previously were not clearly cognizant. From this point of view judgment is not so much a matter of wholly creating new mental material as it is a matter of *ordering* our mental equipment in the most efficient manner.<sup>4</sup>

Granting that the judgment thus secures a new ordering of our mental equipment which represents an advance in knowledge, what is the relation between this new arrangement of our mental furniture and reality? Is this new order which has been secured by the synthesis and analysis of concepts, or of thought-relations, one which holds for reality as well as for thought? How is this possible, since the process has been confined to the realm of conceptual meanings? The problem which the psychologist has to face if he turn logician is precisely this, of how purely mediate thought-activity can have valid reference to a reality completely outside of it, especially since during the interim of this manipulation there was not even the pretense of connection with

<sup>1</sup> *Psychology*, chap. xi, pp. 277-78.

<sup>3</sup> *Principles of Psychology*, I, 466.

<sup>2</sup> *Ibid.*, pp. 270 f.

<sup>4</sup> *Psychology*, chap. xi, p. 278.

reality through the sense *quales* of the image. (It is especially with reference to the concept that psychologists are generally agreed that the specific nature of the image is a matter of indifference.) It is from this source that the absolutist logician gets his predicate—the ‘floating adjective,’ the ‘non-temporal meaning, loosed from its relation to any particular symbol’—with which he has so much difficulty when he wishes to refer its ‘ideal content’ to reality. Indeed, it is the logic which repudiates psychological affiliation that has adopted the psychologist’s data where they are not relevant. We are back again in the conception of thought as a purely mediate, or inner discursive process, except that ‘meanings’ are substituted for the associationist’s atomic ideas.

Does the psychologist as psychologist rightly ignore the question of this reference of thought to reality as irrelevant, because of his initial hypothesis of the pre-established connection between thought and things? It is our opinion that the following statement, although it involves for logic a sheer assumption of the correspondence of thought and thing, is a satisfactory statement from the psychologist’s standpoint.

“This wood is white” is an instance of the analytic judgment. It exhibits a *property* of the *wood* which is *inherent* in it, and may, *therefore*, be said to involve an *analysis* of the *concept* “this wood.” “Wood is combustible” is a synthetic judgment, because it adds to the idea of wood the idea of combustibility, which is not immediately, nor obviously, implied in it. We shall presently see reason to believe that synthetic and analytic judgments are psychologically really one, and for our present purpose we can at least see that they involve, like all the other cases which we have examined, the *mental synthesis of concepts, whose objective union, or separateness, we mentally predicate.*<sup>1</sup>

The psychologist’s account of the judgment, then, is complete when he has secured the conceptual content or idea which is to serve as predicate of reality. With the nature and the possibility of this predication psychology cannot concern itself; it shows the judgment affirming the idea, a completely determined predicate, of a reality or ‘thing’ equally determinate. The gap between idea and reality with which it starts, it bridges with the simple assumption of their agreement. Nor could psychology, by expanding its treatment of the judgment, meet this problem unless it is content to accept the logical skepticism of absolutism as its outcome. Although the psychologist maintains that he is giving an account of thought as genuinely adaptive and reconstructive, the possibility of that adaptation and reconstruction he does not discuss.

<sup>1</sup> *Ibid.*, chap. xi, p. 270 (italics mine).

If the image, on the one hand, was left without definite connection with meaning as the permanent and universal and objective phase of thought, meaning, on the other hand, was left without guaranty of anchorage to reality. The distinction of image and meaning as the psychologist employs it does not avail to make the idea such a tool of knowledge as instrumental logic demands.

It is obvious that instrumental logic cannot stop here; nor can it proceed directly from the point at which psychology leaves off, if it hopes to effect some organic union between thought and reality. On the one hand there is for psychology the reality, the given specific objective existence, then there is the image whose reality as psychical stuff must somehow be reckoned with, and finally there is meaning or objective significance. I can get a copy of reality and then I have an image; but it is 'my' copy, that is, my *image*, and it is *not* reality, yet has a peculiar reality of its own. The judgment has, then, the task of bringing together a subjective and an objective reality. Shall it do this through 'meaning' as a half-way house between objective reality, on the one hand, and the subjective reality, on the other? But meaning has been shown to be a most unsatisfactory go-between. Psychology may assume, but cannot demonstrate, the correspondence of thought and reality. Logic finds it necessary to reinterpret not only idea but reality also. Such a difference in interpretation will give the locus of the psychologist's standpoint with reference to logic.

## CHAPTER III

### THE LOCUS OF THE PSYCHOLOGIST'S STANDPOINT

The dualism of thought and thing which for psychology is initial and persistent is for logic derivative and occasional. There is for psychology a structural and existential discreteness, "washing like an innavigable sea," between idea and object, whereas for logic this duality is a dichotomy of aspect which reality assumes only under specific circumstance. Logic, that is, traces the career of object and idea—subject and predicate—in two directions. From the dualism in which, ceasing to be "ways of living,"<sup>1</sup> they stand forth as explicit existences, it follows them back to their common origin where they were absorptively integrated in a unity and continuity of actuality. Then it accompanies them forward to a common destiny where they merge their identities in a newer and fuller immediacy, in which *reality is neither an external environment of objects, nor an inner continuity of mental states.*<sup>2</sup> Thus the locus of the psychologist's standpoint falls within that of the logician's, and differences in characterization of idea, object, and the individual ensue.

Psychology takes its point of departure from the polarized situation in which idea and object confront each other. Entering the breach, as it were, psychology fixes upon that function of thought whereby

<sup>1</sup> Dewey, *Studies in Logical Theory*, p. 49.

<sup>2</sup> The intention throughout this paper is to equate reality not merely with the 'subject,' or 'fact' or 'object' aspect of the judgment, but to identify it with the cosmic unity and continuity within which and out of which the judgment moment comes to pass. It is *not* the equivalent of 'experience,' if that is taken to mean "experience of something foreign supposed to impress us" (James, *Principles of Psychology*, II, 619). The 'external' or 'environmental' characteristic of reality pertains to the 'subject' phase of the judgment under certain specific exigencies of function; the term 'external reality,' therefore, is used not as applicable to reality as a whole, but as convenient to designate this attribute of 'givenness' in the *subject* phase of the judgmental, or tensional situation, in which reality assumes existential expression. If experience is interpreted, not in the subjective sense of the registration in the individual of an external environment, but is construed rather as *envelopmental*, i.e., as embracing within the unity of its process the opposition of object and idea, then reality and experience are interchangeable terms. There is, however, a significant difference between this interpretation of experience, and experience conceived as 'my' experience, and 'your' experience. (Cf. chapters following and especially chap. v.)

it 'represents'<sup>1</sup> a reality, hitherto organized and integral, but now in process of disintegration, and in need of reconstruction. For, in the moment when reality, through its inner strife and tension, is precipitated into an obstacle or object resisting immediate control, the idea, locating the disturbance, reviewing, surveying the situation in which the difficulty arose—in order to select and determine the materials and conditions within which reorganization can take place—reflects a more or less definitely organized content, and seems to stand over against a world of completely given externality. Seizing the idea at this, its moment of widest differentiation from 'external' reality, the psychologist has stopped its further function of healing the breach and initiating the new condition in which both idea and object shall be annulled as existences. The psychologist's purpose preserves the dualism; the reality which the idea reflects is taken as completely determined and external. The outer world is not indeed sensuous stuff for thought to fashion into 'thinghood'; it is already there. The image in its pristine purity, before it fades into a mere ghost of psychic existence, is a content which has precisely a "point for point" correspondence with the particular object absent to sense; that is, the organization of the idea is the reflected organization of the object. Titchener states that "the idea is unitary because it is the conscious representation of a single object or process in the outside world."<sup>2</sup> This view of the equivalence of the inner to the outer order should make of psychology a thoroughly objective science; there should be no objective-subjective problem for it to consider, since the inner as exact counterpart of the outer is a literal translation, through the medium of the psycho-physical organism, of external reality into terms of consciousness. Ideas are images, indeed they are after-images, of objects and events in the external world. There would be no problem of relating the idea to reality except as a matter concerning the efficacy of the psycho-physical machinery. Mead says:

What we generally refer to when we are speaking of psychical states are elements of objects which are simply abstracted from the objects themselves. I speak of the color red, and in so doing have in mind something that I have abstracted from certain red objects. To get a concrete picture of this, I call to mind the visual picture of the object itself. In either case the object is itself known as objective; for even the picture of the imagination is objective so long as it is dealing with the element of an objective world which is not

<sup>1</sup> Cf. Moore, *The Functional versus the Representational Theories of Knowledge in Locke's Essay*, p. 57.

<sup>2</sup> Titchener, *Outlines of Psychology*, p. 183.

questioned, however fantastically it is put together. Elements of consciousness are not as such elements of a psychical character.<sup>1</sup>

The 'objects' with which psychology deals are, then, as tangible and measurable as the objects of physical science. Yet we noted above how the idea was reduced to 'subjectivity' with the subsequent attempt to cram objectivity into it. It is only by occupying two positions at once that such a situation arises for psychology—only as psychology views idea as at once authoritative version of reality as it comes through the instrumentality of the psycho-physical organism, and yet as mere representation of that reality in the original. There is, thus, the permanent dualism between percept and object perceived; between idea and object. The idea which as presentation is itself an object becomes merely a mode of *apprehending* a reality outside of itself. The ascription of 'subjectivity' to the idea is not a consequence of reducing the object to equivalent conscious elements, but is rather the result of generalizing both poles of the dichotomized situation. When the object-pole is universalized into an external environment, the idea-pole is universalized into a *subjective* ideality; when 'things' constitute an impersonal and external environment, 'thought' must be personal and internal.

Instrumental logic accepts the realism of psychology which makes the idea a factual existence and content—a form which reality manifests under certain conditions—but it rejects the subjectivism which makes it stand as a representation of an absent reality. The idea has for logic as real a status as the psychologist chooses to give it, and yet it may mark the subjectivity of experience in a way that the idea for psychology cannot. Logic finds the subjectivity of the situation in which the idea occurs, not in that reality is absent to sense, but just in the fact that reality is *present in 'objective,'* i.e., *ambiguous* form. For logic there is no reality already fixed and organized from which, as object antecedently present to sense, the image is derived, and which it represents in complete perceptual-like wholeness when it is absent to sense. In any genuine tensional situation, reality is not present as completely determined. Reality is particularized and objectified as present to sense, only as it is in process of disorganization, and in need of reorganization. The image, moreover, reflects not an external reality, but reality in process of becoming externalized, dismembered, disrupted—reality as *partial* and *incomplete*. The image is not the reflection of the *object* previously present to sense but now absent; it is rather the consciousness of the

<sup>1</sup> Mead, *Philosophical Review*, IX (1900), 10-11.

*absence*, that is, the projection or reflection, of that which will so *harmonize* and *complete* the 'present to sense' that it will pass from the partiality of its givenness as *objectified* existence into a new totality in which the particularity of this 'objectivity' will be annulled.

In tracing the idea and object back of the dualism, logic finds that they do not exist apart and complete, each in itself, awaiting the judgment to effect their connection and agreement. They exist only in and during the judgment moment. It is at once the function of the judgment (1) to *particularize* reality into objectivity, for the purpose of further control, and (2) to *overcome* that particularity in order to inaugurate a new continuity. There is no problem of predicating existence of the idea, or of qualifying reality by an ideal content; the idea-object duality *is* the content of reality expressed in existential form. The presence of the idea or image is a sign that reality has become epitomized—on the one hand analyzed, on the other synthesized—into existence. But it is only when a content—part and parcel of the very constitution of reality—resists inclusion within the present trend of activity that it is thus objectified; and by virtue of this detachment, the direction or course which reality is taking also becomes explicit, as idea. The object is not real existence and the idea negation of real existence; the object is the outcome of past organization, the idea the outpost of reorganization. *Together* they define the status of reality in the present, as being of this or that kind, as necessary to suffer this or that reconstruction, before it may leave this stage, and enter upon a new level of development. The differentiation between idea and object is not successive, but simultaneous and progressive. Idea and object, in process of reciprocal dialectic, constitute the existential moment of reality.

There is, further, no fixed line of cleavage between object and idea, as between that which is present in the form of sensory immediacy, and that which is not. In the moment of conflict when some content becomes detached as object, reality appears to be identified with just this aspect of the situation so immediately and compellingly present to sense—so irretrievably *there*, and *external*. But what is thus present is entirely relative to the context of the situation; it is by virtue of its character *as given*, or sufficiently organized that reality takes on the character of sensory immediacy, and *not* vice versa. Lest the psychologist regard this as taking an unwarrantable liberty with the absoluteness and the stability of sensory experience, it is well to remind him that even he offers no *intrinsic* differentia between what is perceived and what is imaged or remembered. To quote Titchener:



There is no fundamental psychological difference between the perception and the idea. . . . Hence although we might be tempted for convenience sake to follow the common usage—to employ 'perception' to denote what is now before us, and 'idea' to denote what is remembered or imagined—we should be obliged constantly to remind ourselves that, in principle the two processes are the same. And the danger of forgetting this far outweighs, in psychology, the convenience of separating the terms.<sup>1</sup>

Again, for the psychologist, the particular material object present to sense turns out to be not immediately present in its entirety, but only partly present as sensorial nucleus, and partly imaged or remembered. Under analysis, the sensorial nucleus breaks up again into a given and a supplied, and the psychologist is led into an infinite regress—until indeed he comes full circle into the concept—when he attempts to find a sensory *quale* as a fixed ultimate, irrespective of the particular situation in which it may happen to function as an element, that is, as the *sufficiently* elemental and given. Sensory *quales* as the irreducible ultimates of the psychologist are methodological abstractions, not because they do not occur 'pure' or alone, but because the very existence of a sensory nucleus is the existence of reality in the form of a focal point of relationship. Logic regards sensory *quales* not as intrusions from an external environment, but as the more or less stable centers *into which* reality has become organized with reference to typically recurrent situations where they function as adequate bases for the further development of reality. They are the points of contact in the clash of conflicting situations; they are the residuum which rolls out as the common element between "colliding contents,"<sup>2</sup> and which may be accepted as "there," since they are the common denominator between the situation just past and the situation not yet consummated. They are, therefore, not discrete 'pin-points' of contact *with* a reality, which as a continuous whole lies beyond them, but are, so to speak, the *nodes* of reality, which mark at once the break in the homogeneity of reality, and the basis for a new continuity.

The psychologist, to be sure, has not a little to say about the relativity of sensation. He explains how its specific nature depends upon circumstance, for example, upon contrast, expectation, attention, previous activity, etc. Yet, these possible variations of intensity, duration, and characteristic tang are regarded as more or less accidental and individual differences in registering the presence of a sensuous stuff,

<sup>1</sup> *Outlines of Psychology*, p. 149.

<sup>2</sup> Dewey, *Studies in Logical Theory*, p. 60, footnote.

which, for the psychologist, is determined and external. It is as the apprehension of a simple fixed quality that the psychologist interprets sensation as ultimate and elemental; there is always an *external* stimulus forcing itself upon the experient by means of sensation. The psychologist's definition of perception as the interpretation of sensation illustrates this twofold attitude of viewing the sensory *quales* as themselves determined by the context in which they occur and, on the other hand, of being fixed functions of the object. In the experiment cited by James of stripping off the context of a word by repeating it many times, the actual sense *quales* are said to change.<sup>1</sup> Illusions, too, show that subsequent interpretation produces a marked change in characteristic *quale*, intensity, and extensity of sensation. Yet the sensorial nucleus itself is regarded as a fixed element, or function of the object, and the supplied factor, or interpretation, as the variable factor. So psychology may justly be said to hold to the externality of reality as sensory environment.

Logic maintains that reality takes on the character of an environment of sensory immediacy when it stands as the *sufficiently* simple or elemental residuum to which a given situation may be reduced, *pending* its reconstruction. What is sensorial, that is, varies from one situation to another; anything which functions as adequate basis for further procedure—groups of objects, whole landscapes, so to speak, 'systems of concepts'—may be foreshortened into a simple real on the level of sensory immediacy. It is thus that logic gets rid of the conception of the pure mediacy of thought. Thought is never a merely mediate affair—a discursive process busied with manipulating, analyzing, synthesizing conceptual contents which must subsequently be referred to reality—but deals with reality in the form of sensory immediacy, always. Reality as sensory immediacy, that is, is always present as one member of the tensional or genuine judgmental situation. The problem, to be sure, is often to find just what this reality is;<sup>2</sup> for the real is the fixed, the hard and fast, the static, the absolutely given, only within the limits of each particular crisis in reality. The task is to determine how much is irresistible impact, immovable externality—how much, and what, reality *is* "there," as adequate basis for further advance. In other words, the reality which at the first moment of conflict is precipitated as an existence so obtrusively given and present to sense must be analyzed, broken up, so that it shall stand no longer in its present

<sup>1</sup> James, *Principles of Psychology*, II, 80-81.

<sup>2</sup> Dewey, *Studies in Logical Theory*, chap. iii, especially p. 61.

stubborn concreteness as resisting obstacle, but shall yield to refashioning in order that it may fit flexibly into a new context. But this cannot be accomplished by dissection pure and simple. It can be effected only by a kind of experimentation in which it must be abstracted from the setting into which it has been consolidated or crystallized by past constructions. It must be severed from what, for the particular situation in question, are the accidents of its previous concomitants. It can be pried from its context only as it is used tentatively as a basis now for this reconstruction and now for that; and with each tentative reconstituting of the given, its reality as sensory immediacy is changing. The medium in and through which reality is experimentally fitted into various contexts is the idea as representative, that is, the image. The viewing of present reality as finding fulfilment in a perspective of projected totality is the *imaging of reality*. The whole process of experimentation, or using the given as a carrier for a shifting series of tentative projections, is the *conceptualizing* of reality. Image, that is, does not re-present or reiterate a reality already organized, nor yet does it falsify or distort it; it is rather the experimental projection of reality as transformed and reconstituted by virtue of its status in a new context. This holds true of the so-called "memory" image as well as of that designated "anticipatory." The memory image is not a re-call or reproduction of reality even approximately as it occurred, but is a calling into existential form an experience not in that form originally. In the words of Dewey, remembering is "re-remembering."<sup>1</sup> The image is not a negation of reality but is always a copartner of reality-as-datum; it supplies it, so to speak, with a fore and after setting; it is a sort of coefficient which, showing *how* the datum is "to be taken" at any moment, constitutes, with it, the existential presence of reality.

During the process of experimentation, image, as the projected end or totality, has served as guide to determine the area within which the subject as immediately given reality was confined. Reality, as subject on the other hand, as providing the given means and conditions under which redintegration must take place, is reciprocally determinative of the limits of image, as end or purpose. Bradley's position that reality as the subject of the judgment is too rich in its infinite connections to submit itself to predication—that one can go on indefinitely tracing out the luxuriant ramifications of its relationships, so that it is impossible to include it under the compass of any specified ideal content<sup>2</sup>—is in

<sup>1</sup> Dewey and Tufts, *Ethics*, p. 252.

<sup>2</sup> Bradley, *Logic*; cf. chapters on "Inference."

keeping with a failure to view the given sensorial content, which expresses reality in its subject relation, as definitely determined and restricted within the boundaries of the ideal or projected end. On the other hand, the conception of thought as purely mediate, with an infinite 'self-representative' activity, and having nothing to mark the limits within which it is mediate, is consistent with a failure to view the ideal content as initiated, and checked, with reference to the real as immediate sensory existence.

How much representation, how much imagery is needed before the datum is fully determined depends upon the extent to which the real, as resisting obstacle, retains the characteristic of externality, and refuses to suffer incorporation into a new unity. If the imagery is reduced to a 'fragment,' so is the *external* reality—there is a minimum amount of tension in the developmental movement of reality, and it is, therefore, not expressed in existential or objective form. It is often asserted that an image worn down and faded may be the carrier of rich and significant meaning. From what standpoint is the image worn and faded; what is the criterion of its 'wholeness' and 'completeness'? The case is rather that the completer and fuller the imagery, the surer the indications that reality is in its existential and relatively static stage of development. When the image is much "worn down" and meager, it is because there is a comparatively ready passage from the tensional moment into the reintegrated situation.

When the datum has been finally determined, and reality, carrying within it the fulness of former immediacies, has been telescoped into *a real*, functioning on the level of sensory immediacy, that is, as a stimulus initiating a direct response, reality becomes again integral and homogeneous. So thoroughly do ideal and given flow together that there is no distinction between percept and object perceived, between sensori-motor and ideo-motor activity; between stimulus and response; between experience and experient. It is the situation which is not knowledge, but is something more than knowledge, into which knowledge leads, and out of which reality may again be born twofold. The account which the psychologist can give of such a moment as this, in so far as he looks upon all experience as 'my' experience, and equates all experience with my *consciousness* of something outside, is one approaching an emotional status, in which there is a minimum of cognitive awareness. But emotion, whatever it may be besides, is usually regarded by the psychologist as a category of subjectivity; it is the peculiar state of the individual experient as distinguishable from the object of his experience.

Interpreted in this wise, emotion would not properly designate the condition of reality in which there is annulled the distinction between thinker and object, doer and deed, obstacle and aim. This moment in which reality, enriched by the mediation or harmony of the erstwhile warring elements within it, sweeps on in the full-tide of a more intensive homogeneity and immediacy may suggest, rather, what has sometimes been called the aesthetic moment—the moment in which, as it were, reality, functioning now as so direct a provocative to response that the objective-subjective bifurcation of reality does not take place, had yet within the psycho-physical organism broken up into stimuli representing all the originally distinct and unmediated values, and which, calling forth correspondingly manifold responses, mutually inhibiting and reinforcing each other, gives rise to the organic reverberation of the “stimulation-in-repose” equilibrium,<sup>1</sup> characteristic of the moment of “appreciation.” But if the aesthetic moment is conceived as falling *within* the individual, it can furnish only a suggestive analogue, and not a real name for the mediated-immediacy-situation which recurs as a characteristic epoch of the evolution of reality. This situation is not located within the individual; the individual falls within the situation.

Subjectivity, logic holds, is a category pertinent only to the situation in which the dialectic of mutual determination of idea and object takes place. It is not, however, to be ascribed to the idea or image in contradistinction to the object; subjectivity is just the tentative aspect<sup>2</sup> of the whole movement. As equivalent to the ‘personal,’ the ‘uniquely individual,’ subjectivity indicates the occurrence of just *this* crisis in reality which has never occurred before, and will never be again. For logic, that is, the individual is but one of these tensional points in experience. He *exists* only at moments when reality is in process of reconstruction; he is the center of conflicting forces; the registration of stress and strain of contending elements. He comes into existence from a matrix of not merely social—if social signifies only a larger interrelationship among individuals as such—but of cosmic relations and conditions. Idea and object serve to bound the area within which the individual appears, but they are themselves functions of cosmic organization. Idea does not occur as the exclusive, inner possession of an individual; it belongs no more to the individual as such than to the situation as a whole. The interruption of habit which it registers is the interruption

<sup>1</sup> Cf. Puffer, *The Psychology of Beauty*, chap. iii.

<sup>2</sup> Dewey, *Studies in Logical Theory*, p. 53.

of the habit of the cosmic community. Nor is the object, as forming the other boundary within which the individual occurs, a *particular* reality, or portion, torn from a larger context, but is rather the whole universe of reality focused into just this here-and-now aspect. The judgment process—the idea-object dialectic—as we pointed out earlier, is at once a synthesis of reality into concrete particularity, and an analysis revealing the fundamentals or universal elements of its organization. For the real, as precipitated obstacle, is a crystallization or embodiment of the principles of the organization of reality; and on the other hand, during the interim in which the datum is receiving determination, such organization is falling apart and revealing the universal and permanent elements which may be incorporated into a fresh reorganization. The real, now as obstacle to the furtherance of former organization, now as point of departure for reorganization, betrays the common or universal element that runs through the pattern of reality.

The judgment then, even though concerned with thought and reality as specific occurrence, and not ‘at large,’ or *per se*, may thus secure such universality as is involved in the make-up of reality itself. Furthermore, the judgment is not a process of creation out of nothing; it is not a ‘transmutation’ of reality. The reconstructions which it effects are not the making and unmaking of reality without regard to the “stubborn grain in things.” Although reality is never externality and objectivity in general, yet the real as residuum of past constructions is *there*, rigorously to set the limits and conditions within which reconstructions can take place. Thus, the judgment may secure such *permanence* of truth, and objective validity as characterize reality itself.

As predicate such an idea, intimately bound up with the existence of the object; as subject such a real, permeated to the core with ideality—and the fruit of the judgment, says logic, must be universality, permanence, objectivity of truth. But, thought is “personal,” suggests psychology:

In this room—this lecture-room, say—there are a multitude of thoughts, yours and mine, some of which cohere mutually, and some not. They are as little each-for-itself and reciprocally independent as they are all-belonging-together. They are neither. . . . Whether anywhere in the room there be a mere thought, we have no means of ascertaining, for we have no experience of its like. The only states of consciousness that we naturally deal with are found in personal consciousnesses, minds, selves, concrete particular I’s and you’s. . . . It seems as if the elementary psychic fact were not *thought*, or

*this or that thought*, but *my thought*, every thought being *owned*. . . . On these terms the personal self might be treated as the immediate datum in psychology.<sup>1</sup>

If thought is thus personal, the possession of the individual merely, what boots its close connection with the object? This connection infects the object with subjectivity, but does not make the idea objectively valid. And this is a fair contention from the psychologist's standpoint, although his discussion of thought as personal is not, strictly speaking, equivalent to an account of it as 'subjective.' The antithesis of 'my' thought versus 'your' thought is as purely a matter of objective distribution as a division of property into mine and yours. It belongs to this or that psycho-physical organism, which is one with itself, and different from all others. Psychology takes as its datum a self, which, however social its content, is insulated as an existence from other selves, and from an external environment. The idea which is the possession of this individual, though it mark the break-up of habit and lead to its reconstruction, that is, though it be intimately connected with the 'overt' activity of the organism, yet travels within the bounds of a certain fixed center of responses, initially marked off, and persistently integral and unitary. The idea as issuing from this individual can get extra-individual import only by the assumption of a pre-established harmony between other insulated individuals and itself. Logic finds it necessary to place the psychologist's interpretation of the individual with reference to a wider perspective. Like the dualism of object and idea, the individual occurs only at certain times and is then, so to speak, an eruption into existence of a whole system of relations. No response, no idea, is merely 'my' reaction, or merely 'my' idea. I as a person, as this person, and not that, am just one of these decisive points in the growth and reconstruction of reality.

By way of summary, we may say that for psychology, cognition is an inner process which reflects a world outside of it. "Psychology," says Angell, "professes to investigate primarily the mere facts of cognition, the nature of the knowledge process taken at its face value," i.e., a "process reflecting in some manner a world outside itself."<sup>2</sup> Whatever investigation psychology may see fit to make beyond the "mere facts of cognition" taken at face value, it seems clear that it must do so on the basis of a representational theory of knowledge, which though

<sup>1</sup> James, *Principles of Psychology*, I, 225-26.

<sup>2</sup> Angell, "The Relations of Structural and Functional Psychology to Philosophy," *University of Chicago Decennial Publications*, First Series, Vol. III, Part II, p. 13 (page reference is to monograph reprint).

unquestionably consistent with its own premises leads, if accepted without reinterpretation by logic, to all the baffling contradictions brought out with such convincing finality in the *Studies in Logical Theory*. Psychology may demonstrate the effectiveness of the judgment as an instrument of adaptive behavior, nevertheless the adaptation secured by means of the report which the psychological idea gives of reality is *to* a reality which is unaffected by it. Thought, if efficient in attaining knowledge, is so by way of learning new facts about a reality which is entirely independent of it. The judgment, to repeat, is a psychical act whose reconstructions occur entirely in the mind. Logic, on the other hand, makes of the judgment, not an inner act, but the dissolution-resolution process by which reality itself is active, changes, and develops. The psychologist views thought at its point of widest differentiation from an external reality; thought as a constituent, and constitutive, part of a single reality process can be stated only from the standpoint of the logician's premises and technique.



## CHAPTER IV

### THE NATURE OF THE PSYCHOLOGIST'S "PROCESSES"

The psychologist, then, cannot project his standpoint into a satisfactory world-view. As has been indicated, he is dependent for his material upon the polarized situation in which reality becomes differentiated into two conflicting elements—elements in the sense that they are for the time being ultimate and irreducible, each to each. When such episodic ultimateness and irreducibility are universalized into a permanent status, there result the abstractions, idea and object. Further, when the elementary character of these two aspects is not kept strictly within the limits of the several sciences or disciplines (the physical sciences, on the one hand, and psychology, on the other) for the special purpose or interest of which the abstractions may afford convenient working-bases, there are created all the thought-reality antinomies indigenous to a representational epistemology. The psychologist, however, is undisturbed by these antinomies in so far as he consistently translates 'external' reality into states-of-consciousness equivalents, for the duality of the conflicting elements then falls within the 'mental state.' There is something within it which is idea, and something which is object. Reducing the original reality-dilemma to these equivalences, it is easy to ignore the process of reduction by which they were obtained, and consequently, to take the next step to subjective idealism. The problematic situation thus is one only *to* thought; the obstacle one only *for* thought; the disruption one only *in* thought. Hence, thought, in resolving the conflict, in healing the dualism, heals only a schism within itself. It is equally possible to pass from an idealism of this sort to naïve realism. If thought can be thus occupied only with its own discursive activity, the object remains wholly impervious to thought's futile industry.

However, this is neither the idealism nor the realism of instrumentalism, which insists that the duality of elements is no more a condition existing merely for thought than the unity out of which it arises is one merely for, or in, or to, thought. On the contrary, the realism of instrumental logic is stubborn and insistent. The unity of the reality-process, it maintains, is not one of which the individual has merely 'consciousness' or knowledge. Rather is he woven warp and woof

into the texture and pattern of the reality fabric, and his awareness of the reality-unity is not some inner experience of a reality whose content he may *know* but never *be*. His awareness of the oneness and immediacy of reality is the aliveness of the reality-process in and to itself. So, too, the duality of elements within the reality-process is part and parcel of its warm and intimate existential immediacy. Indeed, it is precisely the existential immediacy of both aspects which constitutes the very reality-dilemma.<sup>1</sup> Holding these elements thus co-ordinate in actuality and immediacy, instrumentalism can exhibit its realism as the necessary complement of its idealism and, vice versa, can show its idealism to be the indispensable counterpart of its realism.

It is not possible for psychology, which perforce reduces the three-dimensional, duality-in-unity character of reality to the linear dimensions of an 'inner continuity,' to handle the dialectic between the elements in conflict (idea and object) as a process of reality-reconstruction-and-reconstitution. This the psychologist may be ready to admit and yet may demur at the consequence which seems to follow, namely, that psychology cannot discuss thought as a genuine process at all. What becomes of the transitive states, the onward-flowing character of the stream, the process of association, the busy thoroughfare between idea and idea in the judgment process? The answer, in part at least, would seem to be that the transitive states, the more or less will-o'-the-wisp affairs which elude the alert introspection of the psychologist, are a methodological fiction. There are no connections between substantive states, for such states are abstractions, and connections between them cannot be made by inserting a series of other states which move swiftly by. The difficulty is not that of catching the flitting, transitive things which, within our grasp, "melt like snowflakes on the river"; the so-called transitive states are the psychologist's attempt to translate the passage from integral to integrated *situation*, and do not mark a transition from *idea* to *idea*. Further, other cognitive processes, thinking for instance, as exemplified in the association of ideas, must be denied to be processes in the sense of operating among the psychologist's ideas.

Ideas, we pointed out, are genuine stages in the judgment moment (the dissolution-resolution process) which the psychologist arrests and takes from their respective settings. Nor is this abstraction of the idea from its setting of the sort to which every psychologist calls attention, namely, the dissection out of a larger complex of *consciousness*. The abstraction referred to here is not from a *consciousness* complex, but

<sup>1</sup> Cf. chap. iii.

from a reality-situation in which the idea occurs as a genuine phenomenon. As containing within themselves the reflection of a certain organization of what is for the time being 'external' environment, ideas are complete structural units—for psychology the substantive states, for logic arrested stages in the judgment. No magic can set up organic relations among them; there is no question of continuity or discontinuity between them; each is unique and has relationship only with the reality-situation in which it occurred. On the other hand, there is no more genuine relationship between the abstracted 'objects' than between the ideas—the continuity is no more 'external' than it is 'internal.' Were there a continuity of externality, psychology might well claim to secure a continuity of internality by the simple process of representation or reflection. The continuity, however, is one of the reality-process itself, and psychology in setting up a continuity between ideas has a somewhat extraordinary task on its hands. The externality aspect of reality the idea may report through representation, but since the continuity of reality is not located in its externality, psychology can only supply it at first hand, and this it does by vitalizing ideas into working relations with each other. Thus it constitutes them a reality-process of their own order.

Münsterberg affords an admirable, because extreme, instance of this procedure of the psychologist. He starts out by making the idea as it is for the psychologist, not only an abstraction, as it is held to be from the point of view here presented, but indeed, an artificial construct; that is, he does not regard the idea as a genuine phenomenon which actually occurs, and which the psychologist arrests in its functioning, but looks upon it as the psychologist's artefact. This idea is never "born" in the actual thinking process; it is an existence which never occurs as such, but is the result wholly of the psychologist's peculiar occupation.<sup>1</sup> This idea, furthermore, has no meaning with reference to a world of reality values. (This position differs somewhat from that of Bradley and Taylor. Bradley regards the idea, as psychology deals with it, as a natural occurrence, but since it is a mere *psychical existence*, it can, at best, have only symbolic connection with a world of logical meanings.<sup>2</sup> Taylor agrees with Münsterberg as to the origin of the idea, that is, he makes it a deliberate construct of the psychologist, but ultimately he gives it a symbolic function with reference to a world of reality meanings.<sup>3</sup> In so far as he does this, he illustrates the same type of procedure which we charge against Münsterberg.) The meaning of the idea is merely,

<sup>1</sup> Münsterberg, *Grundzüge der Psychologie*, I, 163 f.      <sup>2</sup> Bradley, *Logic*, pp. 1-10.

<sup>3</sup> Taylor, *Elements of Metaphysics*, Book IV, chap. i, pp. 298-301.

then, the fact of its existence in the stream of consciousness which the psychologist studies; it has a place in that stream, certain antecedents, certain consequents, and beyond this, it means nothing. However, if these ideas, these "psychical existences," are to be ascribed entirely to the psychologist's enterprise, we are the more surprised to find them setting up in business for themselves and constituting a bona-fide process. "Psychologisch bedeutet das Wissen, das sich auf die Vorstellung stützt, somit zunächst nur gewisse Einflüsse der Vorstellung auf den übrigen Bewusstseinsinhalt; Associationen und Hemmungen treten ein, Symbole und Zeichen, Worte und Schriftbilder bedeuten uns mehr als sie sind, weil sie *anderes miterwecken*. . . ."¹

How in a realm of abstractions can one abstraction have "influence" upon another? Münsterberg says that these ideas do not leave the level of their own plane of existence to connect with a world of values beyond, but even so, can they enter into relationship with other denizens of their shadow world? If they can and do, have we not here an actual process, a genuine occurrence, and have we not given the "psychologist's" idea full title to reality? If there can be associations, inhibitions, mutual reference, and influence among these ideas, is this not a genuine thought-activity of some kind? Is not the abstractness, rather artificiality, of the ideas canceled in the very concreteness of the enterprise among themselves? Then we are caught again in the traditional unbroken continuity of the inner stream. But what a thing of shreds and patches, what a motley garb of reality and abstractions this inner continuity must be, if such is its genesis!

It is largely through the category of association that the stream-of-thought conception has endured so long, and has been imported into contexts to which it is not applicable. Yet it is fair to say that the doctrine of association, as the psychologist expounds it, is still far from being 'crystal-clear.' Through its agency the psychologist secures the integrity of the stream, for he thereby links thought to thought, that is, makes of ideas a closed series in which each idea conditions the sequence of another. The law of association binds idea to idea, fore and aft, so that no hiatus is suffered to occur between them. Reading forward, the law says that "whenever two images or ideas have been juxtaposed in the mind, there is a tendency when one recurs for the other to come with it."² Reading backward, it states that no idea or image may at any moment be in the foreground of consciousness unless it is connected with its immediate predecessor.³ Here, then, is a closed

¹ Münsterberg, *op. cit.*, p. 162 (italics mine).

² Angell, *Psychology*, chap. viii, p. 206.

³ *Ibid.*, p. 207.

circuit of mechanically determined sequences. This unbroken, closed-from-behind continuity is precisely the sort of thing which instrumentalism finds so unwieldy and useless. The psychologist, moreover, is not unaware of the difficulties of this account, even as more immediately applicable within the field of psychology itself, and offers the very significant suggestion that association occurs not among ideas but among objects, that is, he refers it as a process to the externality aspect of reality.<sup>1</sup> Association would, accordingly, be a methodological abstraction or device whereby the psychologist handles ideas from a perspective (the introspective viewpoint) which marshals them into a swiftly moving procession. Like Berkeley and Hume, however, the modern psychologist shall search in vain for a genuine bond of connection between *ideas*. Association by similarity, the type of so-called "internal" association, in which ideas are said to be not merely successive, but bound to each other by a core of inner connection (according to the second aspect of the law of association all association of ideas betrays this inner nexus), either is not a process occurring among ideas, or it is anything but the selective, adaptive, projective activity which, as the basis of reasoning, it is purported to be. Similarity, the psychologist tells us, is not a causal principle determining the sequence of ideas,<sup>2</sup> but ideas may be pronounced similar after association, operative from behind by habit, recency, vividness, etc., has precipitated just this particular sequence, which then, in an *ex post facto* manner, may be adjudged 'similar' to its predecessor. Reasoning as the reconstructive activity which goes forth in search of the similar, i.e., which seeks to find a common principle of organization, or a 'middle term' between two situations that resist each other in their mutual concreteness—this is not a process occurring among ideas, or else it is a process which must forfeit all claim to projective control over its own sequences, i.e., it is a mechanical and not a teleological procedure.

If association cannot be pressed into service to guarantee a vital process-connection between ideas, no more can the judgment combine ideas into real unions. As registering a definite *status quo* of the reality-dilemma when they are arrested in their functioning, they are complete structural units. Why should they be joined together? Into *what* could they be synthesized—a fresh abstraction? What the need of analysis and how can they be analyzed? What the number, and where the cleavage of parts in a completely unitary content, such as the psychologist assures us any idea must really be? If ideas are the stuff which the judgment must manipulate, it is small wonder that the logician

<sup>1</sup> James, *Principles of Psychology*, I, 604.      <sup>2</sup> *Ibid.*, p. 591.

is torn between deciding whether the process is one of analysis or of synthesis. On this basis, the problem of the synthetic judgment offers no more difficulties than does that of the analytical judgment. The psychologist, indeed, has scarcely disentangled himself from the intricacies of the mystery of how "psychological analysis" of a unitary mental content is possible. James, for instance, reduces all analysis of presentations or ideas to the analysis of objective facts which are known by them.<sup>1</sup> *On the level of ideas*, there is no answer as to whether the judgment is analytic or synthetic, and Kant's searching scrutiny of the synthetic judgment is no more pertinent than the query: "How are analytical judgments possible?"

The psychologist's 'higher cognitive' processes, i.e., all operations which seem to have self-sustained continuity as they ply between idea and idea, belong to the representative phase of the judgment situation. But this representative aspect occurs within definite limits; it does not go on unceasingly, and is itself nothing more than the search for mutually relevant responses and stimuli, or datum and ideatum, or subject and predicate.<sup>2</sup> Those which are found relevant to the same end or purpose are thereby said to be associated by similarity. Such association does not continue indefinitely, but is to be located wholly within the region of search for appropriate subjects or predicates. There may be a somewhat extended rehearsing of possibilities before the representative function is complete, and the so-called association process may be said to be coincident with this rehearsal. Association appears, then, to be a convenient method for viewing ideas abstracted from the situations in which they function, and for regarding them as existences which sustain relations to each other. Nevertheless, the logician has found it difficult to escape from the bondage of the doctrine of association and its near of kin. It seems a fact so easily verifiable through introspection that it has been difficult to recognize that it is only from the introspective point of view that thought takes on this character. The custom of thus viewing thought has grown almost into the pertinacity and obstinacy of an instinct, and the tenacity of its hold makes it well-nigh impossible to venture far enough from the conception of thinking as a self-feeding, self-perpetuating mechanism, living on its own meanings and making its own relations, to give open-minded hospitality to the contention that thought proceeds from, and ends in, a concrete reality-situation, where, however, it is not spontaneously generated, nor does it "commit suicide," but it is reborn, rather, into a new reality-status.

<sup>1</sup> *Principles of Psychology*, I, chap. xiii, especially p. 523, footnote.

<sup>2</sup> Cf. chap. iii.

## CHAPTER V

### TYPICAL STATEMENTS OF THE RELATIONSHIP

In the earlier form of the problem in which interest was directed more specifically to the two disciplines in question, the discussion of the relation of psychology to logic took on the guise of a debate as to which was the more comprehensive of the two. The argument savors of a scholastic exercise in determining the intension and extension of concepts, and runs in a circle of futile reiteration because no common standard or criterion is suggested with reference to which the greater or lesser generality may be measured. The argument, in schematic form, has been that psychology as the science of mind includes the study of all the conscious processes, whereas logic deals with only one portion of the field, and that only under the aspect of correct or incorrect reasoning. Thus logic is the less comprehensive of the two and must surrender its independence, for it is related to psychology as part to the whole. Logic retorts that it is the most general of all sciences; that it formulates laws which are prescriptive universally, and treats of those forms and principles of thought which must be employed in every branch of knowledge. Hence psychology, in gathering its data, classifying, systematizing, and drawing conclusions about them, must use the logical forms which are fundamental to all thought. The psychologist as reasoner, then, constitutes only one instance of the procedure which the logician investigates. In this sense logic maintains that it is not dependent upon the field mapped out by the psychologist, and that as the methodology of all the sciences it may be said to be wider and not narrower in scope than psychology. The psychologist replies that the logician must use as the raw stuff of his investigation the elements which the psychologist provides as constituents of the reasoning process. Moreover, psychology can, with its introspective gaze, sweep the whole horizon, and include in the survey the very procedure of the logician as a mental process falling within the psychological domain. Logic is thus a psychological discipline. The following statement of Lipps expresses the general spirit of this view: "Die Logik ist eine psychologische Disziplin, so gewiss das Erkennen nur in der Psyche vorkommt und das Denken, das in ihm sich vollendet, ein psychisches Geschehen ist."<sup>1</sup>

<sup>1</sup> Lipps, *Grundzüge der Logik*, pp. 1-2.

If all thinking or knowing is a "psychical" process which takes place within the inner sanctum of the *psyche*, the settlement of this dispute would indeed be an incomparably more difficult feat than that which the serpent undertakes in attempting to swallow its tail. Furthermore, this claim of psychology overreaches itself, since, if consistently held to, not only all so-called mental sciences, but all physical sciences too, may be included in psychology. Consonant with this viewpoint, that is, existence of any kind is first of all only *for* consciousness, then *in* consciousness, and psychology, in the end, deals with all existence, and issues naturally and simply in subjective idealism. In practice, however, the psychologists who have claimed logic to be a branch of psychology have usually been content with a division of labor, concerning themselves generally with the processes of cognition, and leaving to logic the investigation of the products of reasoning and their interrelations.

Another turn of the argument which had vogue in connection with the part-whole controversy was that which designated logic as an art and psychology as a science. Logic, on this view, formulates rules for the correct procedure of reason, whereas psychology studies the essential nature of the reasoning process. When this separation between art and science is made, logic retorts pertinently that it is rather the science *of* an art, or in the words of Locke, "God has not been so sparing to men as to make them barely two-legged animals and left it to Aristotle to make them rational." Logic, that is, meets this issue by showing that it depends upon the previous activity of the knowing process, and is the science of the laws of that activity; that only in so far as it is a science does it make possible a conscious application of these laws. So far, then, as the art-science distinction is concerned, logic denies that it is less inclusive than psychology.

To make one science dependent upon another by way of a part-to-whole relation is to make neither independent; either they form one homogeneous whole and are indistinguishable, or each must have distinctive characteristics. It is a comparatively recent interpretation which, once establishing the dependence of logic upon psychology, seeks to obliterate all theoretical distinctions between the two. If they are held to be distinguishable, however, the question has sooner or later to be faced as to what the nature of this part-to-whole relationship is. Is it a difference in method, material, standpoint? (From the point of view of this paper there is no such part-to-whole continuity but the locus of the psychologist's standpoint falls within that of the "logical situation." Cf. chap. iii.)



The attempt to determine the relationship of logic to psychology on the ground of relative comprehensiveness, though proper to the traditional opening of the argument, was usually followed by the more fruitful discussions of the respective aims and functions of the two disciplines. Logic and psychology, as theory or science, appear equally to be concerned with reflection upon thought. James says: "A mind which has become conscious of its own cognitive function plays what we call the psychologist upon it."<sup>1</sup> He suggests further that "if to *have* feelings or thoughts in their immediacy were enough, babies in their cradles would be psychologists, and infallible ones."<sup>2</sup> But logic, also, appears to be "conscious of its own cognitive function," and the babe in his cradle who has a certain "natural" logic, or *logica utens*, as the schoolmen might call it, is no better logician than psychologist. The problem, then, is to discover how the reflection which logic turns upon thought differs from the introspective procedure of psychology, *granting, for the time being, the assumption that psychology and logic examine the same thought-processes*. Palágyi offers what he terms a "new proof" of the distinction between logic and psychology based on this assumption of the coincidence of material. He says that psychology hopes from its investigation of, or reflection upon, thought (he deprecates the use of the word introspection as a misleading metaphor) to secure nothing more than an accurate report of the psychical or mental processes. He points out that the psychologist complains that these processes change under such reflection or observation, whereas what he desires is a faithful copy or reinstatement of them: "Für diesen letzteren nämlich ist es von grösster Wichtigkeit, dass der psychische Vorgang, auf den er reflektiert, durch diese Reflexion auf denselben, möglichst unverändert bleibe. Ist es ja eine ewige Klage der Psychologen, dass durch das Belauschen der psychischen Vorgänge, wie etwa der Freude, der Trauer, etc., diese selbst irgendwelche Veränderung erleiden."<sup>3</sup>

The logician, on the other hand, reflects upon thought in order to effect changes in it—to make it more efficient: "Im vollen Gegensatz zum Psychologen reflektiert der Logiker auf die Erkenntnissthatigkeit nur deshalb, weil er dieselbe modifizieren, d.h. läutern, kräftigen, vertiefen, sagen wir kurz; potenzieren will."<sup>4</sup>

It is somewhat difficult to determine from Palágyi's exposition whether he means that, in the case of logic, reflection upon thought or

<sup>1</sup> James, *Principles of Psychology*, I, 272.

<sup>2</sup> *Ibid.*, p. 189.

<sup>3</sup> Palágyi, *Die Streit der Formalisten*, p. 68.

<sup>4</sup> *Ibid.*, p. 69.

thinking is for the purpose of making the thinking process a more efficient tool for knowledge generally, or whether he means that the logician "turns back" upon thought for the purpose of getting, upon a specific occasion, "more certain," "clearer," and "more potent" knowledge. On the whole he seems to have in mind the former. To this the psychologist may well make answer that psychology hopes ultimately by the study of the thinking process to point out ways for the better development of mind and control of thought, making it a surer, more effective instrument of knowledge.

There is a distinction worth maintaining in the conception of logic as a study of thought for the purpose of more effective control. The distinction, however, is rather different from that which the above passages indicate, for they reveal the traditional 'inner-process' interpretation of thought; it is this thinking process which as such, by reflection upon itself, is to be improved. According to Dewey, thought is called forth only upon a specific occasion in the event of a specific problem or need.<sup>1</sup> It is only when thought is continually baffled in its attempt to effect a reconstruction, only as it is held apart from passing into more direct experience, that thought itself is made an object. It is at this moment that the logician is born. His purpose is to discover why thought fails of its accomplishment, or why reconstruction of the dilemma-situation fails to take place, but in studying thought he does not make of it an inner process. Rather, he studies it always as the problematical aspect of a situation. It is with reference to the whole situation that some content or element is to be set aside as merely "psychical," and some regarded as objective.<sup>2</sup> In this sense, the logician may discover the marks of the 'psychical,' or merely subjective, and therefore determine what in this particular instance may be set aside or eliminated as such. Thus the logician returns to his immediate problem with enriched and more effective control, but the control is not of a mere thinking process—it is not the control of thought as mere thought. The logician or theorist does on a larger scale what the occasional thinker does whenever, baffled in his attempt to secure the result he desired, he 'turns back' to examine his procedure. Nor is the reflection of the logician any more mediate. Once again, he is not reflecting upon thought as an inner process, but is examining it as an immediate reality-activity. He is not *introspecting* as logician.

<sup>1</sup> Dewey, *Studies in Logical Theory*, chap. ii.

<sup>2</sup> Dewey, *Studies of Logical Theory*, p. 54, note. Cf. also Mead, "The Definition of the Psychical," *University of Chicago Decennial Publications*, First Series, Vol. III, Part II, especially pp. 28-29 (page reference is to monograph reprint).

There is not a little ambiguity in the connotation of the word 'introspection.' In popular usage, anyone who thinks, meditates, deliberates, etc., is said to be 'introspective.' But even the psychologist who uses the term widely would hardly admit this usage; for instance, he would not call memory introspection. Yet so strongly is the introspective squint developed, that we apply the term to anything connected in any way with a thought-activity, and it is difficult to conceive of any occupation or reflection upon thought which is not introspective. However, introspection is not a *method* of dealing with thought, it is a *standpoint*, and its assumption results in characteristic changes in the material thus viewed. The psychologist, however, first defines his *attitude* as introspective, and then speaks of introspection as a *method*, indeed, *one method* among several other methods. The methods of psychology are not the distinctive features of the science. It is distinguished rather by its standpoint. If, under cover of retaining introspection merely as *one* of its methods, it shifts its standpoint from that of the spectator of a process which "mediates and reflects an outer world," there is of course no limit to the transformation it may undergo. Logic, in reflecting upon the cognitive process, may or may not adopt the introspective standpoint of the psychologist. As shown in a previous chapter, it is the intellectualistic type of logic, whose basal assumption is the representative function of thought, which holds to the psychologist's introspective standpoint to the bitter end of skepticism.<sup>1</sup> The logician who views thought and reality as reciprocally determinative does not adopt the introspective point of view. For him the line between thought and reality is a problematic, a shifting one. He cannot abstract it bodily from its context and look at it as does the psychologist his inner process. It is part of his problem, as thinker, to find out what in the situation is the so-called thought side and what the reality aspect. Thinking, to repeat, is for the logician a process of reality-in-manipulation, the medium through which reality is in process of development. When he introspects, becomes a spectator of, that is, considers this or that aspect of the situation *as inner*, he turns psychologist.

A prevalent view as to the relation of psychology to logic is that which regards psychology as a positive and logic as a normative science. This is common to so many schools of logic and to such various types of psychology that citations may be made without direct reference to the contexts in which they occur. Stout makes the distinction as follows:

Logic is a normative science; it is preoccupied with the distinction between truth and error. It has to show how thought must proceed to represent its

<sup>1</sup> Cf. chap. iii.

object correctly. Psychology, on the contrary, deals with laws that govern the cognitive process as it actually takes place. The principles which it lays down account equally for correct and incorrect thinking.<sup>1</sup>

Stratton's account is similar and somewhat more explicit:

Logic and psychology deal with the same material within certain limits. But in working up the materials there is in each one of these sciences a different end in view and a different mode of procedure. . . . Psychology is an effort to state the natural causes of various mental occurrences. . . . The main question is entirely regarding matters of fact. What is the actual causal order or connection in mental life?

Logic is not an attempt to search for the causes of mental occurrences but an attempt to develop a principle of criticism. In logic we assume the facts of reasoning, and proceed not to explain, in a scientific sense, but to set forth the abstract marks which distinguish the consistent from the inconsistent. . . . In logic we do not ask what the causes are which actually produce conclusions; nor as to what various influences are that give some mental facts one character and to others another. . . .

The two sciences thus present different and distinct standards of worth. For logic those combinations are good, the parts of which are related in accordance with what we call logical norms. For psychology those combinations are good, the parts of which are causally connected. The whole machinery of psychology is contrived for the purpose of explanation, while the aim of logic is to present a critical canon.<sup>2</sup>

The above citations make emphatic that the function of logic is to supply a norm or criterion for correct reasoning. This norm, however, is not to be merely a standard by which to measure thought, but is to operate as a control over thought. Sigwart says:

Since, then, actual Thought can and does miss its aim, we have need of a discipline which shall teach us to avoid error and dispute, and to conduct Thought in such a manner that the judgments may be true—that is, necessary and certain—that is, accompanied by a consciousness of their necessity, and therefore universally valid.

Reference to this aim distinguishes the logical from the psychological treatment of Thought. The latter is concerned with the knowledge of Thought as it actually is, and hence seeks the laws according to which, under certain conditions, a certain thought appears in just one way and no other. Its task is to explain all actual Thought according to the general laws of psychical activity, and as arising from the particular conditions of the individual instance, thus dealing with all Thought alike, whether erroneous and disputable, or true

<sup>1</sup> Stout, *Manual of Psychology*, p. 3.

<sup>2</sup> Stratton, *Psychological Review*, III, 313, 314-20.

and generally accepted. The antithesis of the true and the false is no more a psychological one than is the antithesis of good and bad in human action.<sup>1</sup>

Lotze presents the normative-positive distinction in the form of an antithesis between thought as a mechanism and thought as controlled and affected by logical norms.

We may suppose the existence of all of these things, of perceptions, ideas, and their connections according to the laws of a psychical mechanism, but logic only begins with a conviction that the matter cannot end here; the conviction that between the combination of ideas, however they may have originated, there is a difference of truth and untruth, and that there are forms to which the combinations *ought* to answer and laws which they *ought* to obey.<sup>2</sup>

Trenchant criticism of this normative-positive distinction is not lacking. Mackenzie gives tersely the main trend of the criticism.

Logic is said to be concerned with correct thinking; but there is a very true sense in which it may be held that incorrect thinking is not thought; so that, from this point of view, Logic may be said to be concerned with the principles of thought as thought. . . . It [the distinction between positive and normative sciences] is one of those convenient distinctions (like that between sense and thought, knowing and willing, matter and spirit, etc.) which require to be drawn at the outset, but which may be gradually superseded.<sup>3</sup>

In similar vein Mellone says:

It is usually said that Logic is a regulative or normative science, showing how we "ought" to reason; it treats of the "ideal," while Psychology treats of the "actual," showing how we do reason. This distinction seems to me worse than useless; it obscures the whole matter by introducing the complicated metaphysical problem of what is the true relation and contrast between the ideal and the actual, the "ought" and the "is." In the first place, we must ask, what exactly is meant by saying that Logic shows us how we *ought* to reason. Surely that it shows us what the true nature of reasoning *is* . . . it shows us the essential *differentia*, which is simply the nature of the process itself. So far as any process of thought is fallacious or false reasoning, it is *not* reasoning; its limbo must be more or less non-rational in character, being determined by the force of feeling, of custom or habit, or "authority," or other processes which it is the business of psychology to investigate. Unless, then, it can be denied that reasoning is an actual process of the mind, we must admit that it is the business of Psychology to show us what reasoning is, since Psychology has to deal with the mental processes.<sup>4</sup>

<sup>1</sup> Sigwart, *Logic*, p. 9.

<sup>2</sup> Lotze, *Logic*, p. 10.

<sup>3</sup> Mackenzie, *Outline of Ethics*, p. 20.

<sup>4</sup> Mellone, *Philosophical Criticism and Construction*, p. 41.

Lipps, too, shows the coincidence of the positive with the normative aspect of science:

Die Frage, was man thun solle, ist immer zurückführbar auf die Frage, was man thun müsse, wenn ein bestimmtes Ziel erreicht werden solle; und diese Frage wiederum ist gleichbedeutend mit der Frage, wie das Ziel tatsächlich erreicht werde.<sup>1</sup>

Obviously these quotations represent somewhat different viewpoints as to the nature of psychology and logic, and doubtless the sharpness of the antithesis would be lessened not a little if full justice were done to the contexts of the positions represented. Yet, selecting two writers whose positions show more points of agreement than of difference, we find the distinction held by one and repudiated by the other. Schiller maintains that it is practically impossible to exaggerate the intimacy of the relationship between logic and psychology, that they are "perfectly inseparable" yet "perfectly distinct."

As it is, the natural process has to be regulated and controlled, and so falls a prey to *two* sciences. The same cognitive values occur twice over, first in Psychology as so many facts, then in Logic, as subjects for critical evaluation. Nor is it difficult to understand how two sciences can work over the same ground: they cultivate it with a different purpose, and so raise different crops. . . . .

It is manifest, moreover, that the two sciences must work together hand in glove. Logic requires trustworthy descriptions of cognitive happenings before it can evaluate them with safety; for these it should be able to rely on the co-operation of Psychology. In other words, the collection and preparation of the material which the logician proposes to use is essentially a psychological function, alike whether it is performed by a psychologist who bears in mind the need of Logic and the needs of Logic, or whether the logician is enough of a psychologist to do it himself. In the latter case he resembles a painter who, like those of old, makes and mixes his own colors; the logician, on the other hand who proposes to dispense with the aid of Psychology is like a painter who will not use anything so gross as colors wherewithal to paint his 'ideal' pictures.<sup>2</sup>

Psychology, however, like the Little Red Hen, refuses to prepare the flour and bake the bread and get none of the substantial benefit. Angell says:

If psychology is permitted to discuss function at all—and we saw that without being arbitrarily truncated it cannot avoid so doing—the truth or

<sup>1</sup> Lipps, *Logik*, pp. 1-2.

<sup>2</sup> Schiller, *Studies in Humanism*, pp. 78-79.

falsehood of the cognitive processes cannot be a matter alien to its boundaries, because such truth and falsehood are simply impressive names for relatively complete (i.e., successful) operations and relatively incomplete (i.e., unsuccessful) operations of adaptation.<sup>1</sup>

It is apparent that the normative-positive distinction is at best a difficult one. The problem at this level of what thought actually does versus what thought ought to do resolves itself into a question as to whether thought can avail itself of the prescriptions which logic makes. If logic can set up a norm which thought ought to follow in order to insure consistency or truth, and thought can thus be guided and regulated, then does not this very procedure, as norm-directed and norm-obeying, constitute a "natural," or "actual," or "factual" procedure? That is, must not psychology describe and explain this very peculiarity of thought's behavior? Now if psychology shows thought to be subject to control or direction through norms, it must be ready to discuss fully the nature of the norm. It must be able without leaving its own field (1) to supply a norm, (2) to show that the norm can actually operate as an end at which thought aims, that is, that it can have control or regulative power, and (3) that it can be used as a standard whereby to determine the truth or falsity of the thought-process. If it can do this, it has gone far toward making good its claim that psychology and logic are one.

Taking up the question of the nature of the norm which psychology can erect, we find that it is a norm for correct thinking—thinking taken in the sense of an inner activity with certain elements, characteristics, and laws of its own procedure. Thought is from the psychologist's standpoint, as we have frequently pointed out, legitimately a stream, a continuity, an uninterrupted sequence. From the standpoint of introspection, each portion of the stream is determined as psychical event or existence. Whatever psychology may say descriptively, the type of explanation used by the psychology which allies itself to natural science is a mechanistic one, which regards each psychical event as a resultant of previous processes or causes. The problem, then, which psychology has on its hands is to show how a norm could in any way act as end or aim for this process, how it could interrupt the closed series, deflect, control it. The problem of the control of thought has indeed been long a stumbling-block to logic just because it has accepted

<sup>1</sup> "The Relations of Structural and Functional Psychology to Philosophy," *University of Chicago Decennial Publications*, First Series, Vol. III, Part II, p. 13 (page reference is to monograph reprint).

psychology's account of thought unreservedly and then attempted to impose upon it the requirements of the logical situation. Lotze, for instance, affords a striking example of the dilemma which psychology, upon assuming the responsibility of logic, must import into her own domain. Adapting the analysis of Lotze's position, as it is given in the *Studies in Logical Theory*,<sup>1</sup> to the point at issue in our context, we note that Lotze gives an account of thought as a series of impressions and ideas, following each other, 'coincidentally.' They form the stuff or raw material which must be shaped and finally transformed by logic into a 'coherent' series in order that the condition of knowledge may result. But Lotze finds that logical procedure can make no difference in the impressions and ideas if logical relations do not already exist within and between them. He says: "The possibility and the success of thought's procedure depends upon this original constitution and organization of the whole world of ideas, a constitution which, though not necessary in thought, is all the more necessary to make thinking possible."<sup>2</sup>

Yet if ideas and impressions are already so organized into logical coherences, have within them what will constitute them knowledge, logic has nothing to do. We should say that Lotze is discussing 'impressions' and 'ideas,' not as they occur, but as they are to the introspective psychologist. As the psychologist has transfixed them, they are arrested stages in the judgment moment, and either are, or are not, already logically organized meanings. With reference to each other *as ideas*, they stand forever, 'coincident' or contiguous, and can never be made to 'cohere' with each other. (Cf. chap. iv.) The stream of thought, made up of these existences, cannot be directed or controlled. As the psychologist welds these ideas into a continuity, he must needs look at them as determined from behind. Teleology and mechanism are not merely incompatible here; there is no meaning to the term teleology as applied to this inner process, for it is a methodological fiction, and not a genuine process at all. The preconception common to both of the normative-positive disputants is that of thought as an *inner continuity*. Psychology is not called upon to discuss this thought-process as directed and controlled; the problem is not pertinent.

Again both parties to the controversy conceive of the norm as a norm for a thinking process of this character. Psychology has full right to discuss such a norm. But what can correct or incorrect thinking mean on the basis of the stream-of-thought conception? Surely, that there is something inherent in the process itself which proclaims it at

<sup>1</sup> Cf. *Studies in Logical Theory*, chap. ii.

<sup>2</sup> Lotze, *Logic*, I, 36.



once a case of genuine thinking, distinguishing it, for instance, from memory, imitation, emotion, impulse. In this sense, psychology means by correct reasoning a genuine case of reasoning—that this or that is really an instance or example of reasoning and not of something else. It can pronounce dogmatically, then, that incorrect reasoning is not really reasoning, but belongs, rather, to some other phase of consciousness. If, for instance, a conclusion is arrived at through suggestion, imitation, memory, etc., psychology can pronounce that such a sequence cannot be designated thinking, or reasoning. Psychology, indeed, makes clear demarkations between the cognitive and affective side of consciousness, teaching that the cognitive and affective aspects are present in inverse proportion. It is a curious fact that it is logic<sup>1</sup> which now tends to insist that feeling and emotion be included in the cognitive activity, and that the lines of demarkation be softened, if not obliterated.

If, then, psychology claims to be able to measure the truth or falsity of the cognitive process because it tells an exhaustive story and cannot stop short of the outcome, we must ask if the outcome is not something to be located in the stream itself. If it is without the process as an inner continuity, we are outside the boundaries of psychology. Truth or falsity, for psychology, consistency or inconsistency, must be a matter referring to the thought-process as an inner activity. And psychology has every right then to decide what differentiae certain aspects of the stream must possess in order to be called reasoning; it can rule out all cases of reasoning which do not measure up, and assign them to other psychological categories.

The attempt has sometimes been made to distinguish logic, as dealing with thought as general and abstract, from psychology as treating of thought as specific and concrete. Taking this distinction at face value, it is possible to collect as formidable a row of antitheses as the list of Kantian antinomies. A few citations will suggest the lack of a common denominator in the discussion. Baldwin says:

It is especially to be noted that psychology does not deal with abstractions as its distinctive subject-matter. Logic, when it treats of judgments, has in view only the abstract form of connection between subject and predicate, not the concrete judging as it takes place in the individual mind. But it is just this concrete process with which psychology is concerned.<sup>2</sup>

<sup>1</sup> Schiller, *Studies in Humanism*, chap. iii.

<sup>2</sup> Baldwin, *Dictionary of Philosophy and Psychology*, article "Psychology," Vol. II, p. 383.

This statement may be balanced by the following:

That Psychology, like all descriptive science, deals throughout with data which are not concrete experience-realities, but artificial products of a process of abstraction and reconstruction, should be sufficiently clear from the very consideration that, like other sciences, it is a body of *general* descriptions of typical situations.

An actual process of knowing or acting, like every actual event, is always individual and because of its individuality defies adequate description. It is only in so far as a situation admits of being generalized by the selection of certain of its aspects or qualities as representative of its whole reality that it is capable of being described at all. . . . It [psychology] provides us with general formulae, which are or should be valuable as affording a means of describing certain universal features of the process of willing and knowing which it is desirable to study in isolation, but it is of itself as incapable of following the actual course of a real process of willing or thinking, as mechanics is of following the actual course of a real individual process in "external" nature.<sup>1</sup>

In answer to the contention that logic treats of the intellect *per se*, investigating knowledge only, as it were, *sub specie aeternitatis*, as the possession of the mind in general, Mellone says:

Now all Psychology may be said to deal with the 'mind in general' in the sense that it is not biography nor a record of personal peculiarities, but deals with the normal mind.<sup>2</sup>

As to the non-abstract character of logic, Dewey says:

So far from this point of view the various types and modes of conceiving, judging, and inference are treated not as qualifications of thought *per se* or at large, but of thought engaged in its specific, most economic, effective response to its particular occasion; they are adaptations for control of stimuli.<sup>3</sup>

But says Baldwin:

All logic is, and is admitted to be, formal in one sense—as having to deal with the general laws and modes of thinking by which knowledge is constructed, and not with the special character which determines each type of concrete knowledge. On the recognition of such a distinction logic is based and it constitutes the common element in all conceptions of logic.<sup>4</sup>

The view adopted in this paper, namely, that there is no activity of thought in general, but that logic deals with thought as a specific manifestation in a concrete situation, places our decision in this matter.

<sup>1</sup> Taylor, *Elements of Metaphysics*, p. 296.

<sup>2</sup> Mellone, *Philosophical Criticism and Construction*, p. 42.

<sup>3</sup> Dewey, *Studies in Logical Theory*, p. 8.

<sup>4</sup> Baldwin, *Dict. Phil. and Psych.*, article "Formal Logic," Vol. I, p. 392.

However, as a formulation, as a statement of theory, it, like any science, gives an account of typical instances.

While eliminating the particular material of particular practical and scientific pursuits, (1) it may strive to hit upon the common denominator in the various situations which are antecedent or primary to thought and which evoke it; (2) it may attempt to show how typical features in the specific antecedents of thought call out to diverse typical modes of thought-reaction; (3) it may attempt to state the nature of specific consequences in which thought fulfils its career.<sup>1</sup>

In the same way we should designate psychology "general" in that it deals not with this or that individual but with typical conditions and performances of an individual. However, as far as the cognitive process, at any rate, is concerned, psychology deals with abstractions; especially is this true of the psychology which holds to the "mental existence" character of thought, i.e., to the inner continuity of the thought-process. It is, at best, however, a blind procedure to discuss particularity and generality, abstractness and concreteness, without a definition of the standpoint from which these distinctions are made; for these terms are obviously not absolute, but relative to context. The question may be discussed more profitably, therefore, with reference to the more specific form of the problem which is next to be reviewed.

In spite of the immediate acquiescence of the psychologist that the retro-introspective standpoint differs from that of the experient, there is not only the tendency to put back into working relations the idea of the psychologist, but when the adjective "psychological" is used, all caution to preserve the distinction between the experient's standpoint, or, as it is sometimes designated, the "psychical," and the "psychological" is abandoned. The "psychological" tends in popular employment of the term, and in looser technical usage, to be applicable to whatever is intimately connected with the first-hand experiences of an agent. It is not seen that such a discussion as the relation between the "psychological" and the "logical" aspects of a situation is usually conducted on the basis of the difference between the "psychical" and the "logical." It is this ambiguity which makes well-nigh irrefutable so many of the psychologist's claims to cover the whole field of concrete experience, inasmuch as every process, interest, desire, purpose, etc., is called forthwith "psychological," i.e., not merely capable of being considered from the psychological standpoint, but is designated "psychological" outright. Schiller is an arch-offender in this particular. He says:

<sup>1</sup> Dewey, *Studies in Logical Theory*, p. 7.

Thus it is commonly asserted that Psychology does not recognize values, nor Logic care about psychical existence. Yet if so, how could values enter human minds, and how could truths ever become facts?<sup>1</sup>

He continues with the same confusion in mind when he states:

We shall do well therefore to show (1) that without processes which are admittedly *psychological* the occurrence of cognition and even of thinking is impossible; (2) that all the processes, which are regarded as essentially and peculiarly "logical," have a well-marked *psychological* side to them, and that their logical treatment develops continuously out of their *psychological* nature.<sup>2</sup>

Further:

All actual thinking appears to be inherently conditioned throughout by processes which even the most grasping logician must conceive as specifically *psychological*. It is difficult to see, therefore, on what principle logic has any business to ignore them, and to claim to be "independent" of what must influence its own structure in every fiber.<sup>3</sup>

The following passage carries on the same identification of the psychological with the psychical and the word psychical is obviously used as a completely satisfactory synonym.

At any rate, the *onus probandi* would seem to lie on those who affirm that these correlated and interpenetrating processes do not influence each other and that, therefore, their *psychical* nature may be treated as logically irrelevant. Without, however, standing on ceremony, let us show by examples that our thinking depends for its very existence on the presence in it of (a) interest, (b) purpose, (c) emotion, (d) satisfaction, and that the word 'thought' would cease to convey any meaning if these were really and rigidly abstracted from.<sup>4</sup>

Several other passages show unmistakably that these terms are used as completely interchangeable, for he says that "nowhere can we discover anything deserving the name of thought which is not actuated by *psychological* interest." Finally he sums up the situation with the following:

It seems clear, therefore, that without these *psychological* conditions which have been mentioned, thinking disappears, and with it, presumably, Logic. They cannot, therefore, be dispensed with. Purpose, interest, desire, emotion, satisfaction, are more essential to thinking than steam is to a steam-engine.<sup>5</sup>

Schiller's aim is primarily to point out that logic cannot be "depersonalized," that the logician cannot, contrary to the contention of

<sup>1</sup> Schiller, *Studies in Humanism*, p. 76.

<sup>2</sup> *Ibid.*, p. 80 (italics mine).

<sup>3</sup> *Ibid.*, p. 80 (italics mine).

<sup>4</sup> *Ibid.*, p. 81 (last italics mine).

<sup>5</sup> *Ibid.*, p. 83 (italics mine).

the absolutists, ignore the concomitants of actual thinking, and with that immediate purpose in mind the interchange of the words 'psychical' and 'psychological' seems of little, if any, consequence. The issue with which Schiller is concerned is whether logic can abstract from such influences and conditions as that of the individual's purpose, desire, interest, etc. But granted he has carried his assumption, however heartily we may agree that "purpose, desire, emotion, satisfaction are more essential to thinking than steam is to a steam-engine," we may still fail to see how he has established the relation between logic and psychology, and may, furthermore, refuse to regard purpose, desire, emotion, satisfaction, as "psychological" processes. If these processes are "psychological" *per se*, because, as Schiller says, "the whole concrete personality goes to making up any assertion," then he can hardly maintain that logic and psychology are even distinguishable. By the same reasoning, the judgment is itself simply and wholly a "psychological" process. However, if psychology thus swallows up logic it must confess to a double standpoint within its own boundaries and the question has been merely restated, for with the coincidence of the 'psychical' (as Schiller has been using it) and the psychological, the introspective standpoint and that of the direct experient coincide, and there is no psychologist's fallacy; thought knows its object and introspects its own behavior at the same moment. Now the consequences of designating every process which expresses the conscious life of an individual "psychological" are more far-reaching than at first appears. Certainly there is more at stake than the narrower issue of just the proper pigeonholing of these two disciplines, for if emotion, desire, purpose, satisfaction are designated psychological processes, there are sure to attach to them all the attributes which they receive at the hands of the psychologist who has studied them from the traditional introspective standpoint. They are the conscious processes of an individual's mind, the expression of a concrete personality, to be sure, but psychology has its own peculiar and distinctive viewpoint of the individual. Viewed introspectively the individual is a complete integer, having relations with other individuals but after all a unit, definitely isolable from other units or selves. As referable to *this* individual, emotion and feeling are *subjective*, satisfaction is the satisfaction of a need of this or that particular and peculiar psycho-physical organism, desire is an inner attitude, thinking or judging is an inner process coming somehow to fruit in an overt act which means a right or wrong adjustment of *this* individual. As "psycho-" this individual has a consciousness insulated

from others, as "physical" it has a body defining itself over against this consciousness.

It is precisely because the psychologist's reading of the individual is so generally adopted that logicians find the individual an inadequate mechanism for securing truth. Schiller's humanism has precisely this difficulty to contend with, for it starts from "experience"—from 'your' experience and 'my' experience, from an experience definitely owned and marked off at the start as the peculiar and private possession of just such an individual as the psychologist presents to us. Small wonder that the logicians refuse to grant that this individual's subjective prepossessions and prejudices and desires can have anything to do with universally valid truth. On the contrary, they maintain that psychology may deal with thought as it is valid for the individual in circumstances local and specific, but not with thought in its aspect of universality and necessity. Eternal truths have nothing to do with the subjectivity and vagary of the individual. Judgments which have their basis in individual perceptions, observations, memories, expectations, are the province of psychology, but logic deals only with the conditions of universally valid thought. Jerusalem distinguishes logic from psychology on this ground.

Man konnte demnach die Logik auch bestimmen als die Lehre von den allgemeinen Bedingungen des richtigen Urtheilens. . . . Aber nicht an allen Urtheilen sind solche allgemeine Bedingungen ihrer Richtigkeit festzustellen. Eine grosse Zahl von Urtheilen dient dazu, individuelle Wahrnehmungen, Erinnerungen, Erwartungen zu formalisieren und auszudrucken. Alle solche Urtheile, ich nenne sie Urtheile der Anschauung, haben ihrer Natur nach nur subjective Gewissheit und geben daher zu logischer Prüfung keinen Anlass. Eine solche Prüfung kann nur Urtheilen vorgenommen werden, welche nicht individuell bestimmte und individuell gefärbte Thatsachen bezeichnen, sondern vielmehr ein Ausdruck sind für Gesetze des Geschehens. Solche Urtheile nennen wir Begriffsurtheile, und nur diese können Gegenstand logischer Prüfung werden.<sup>1</sup>

Once this distinction is made between judgments which are merely individual and those which are objective and hold universally, it is easy to sever process and product and to hold that eternally valid truths exist without reference to the judging individual. The process of judging, and, indeed, the specific meaning of the judgment moment, may be dealt with by psychology, but absolute and unconditioned truth only logic may discuss. Husserl, who states that psychology has to do with

<sup>1</sup> Jerusalem, *Einleitung in die Philosophie*, p. 31.

the individual, the contingent, the fact existing in time and space, distinguishes truth from facts. Truth, that is, is not factual; it has no existence in time and space. Facts are contingent, individual existences, which come and go, but truth is eternal and timeless, and has, finally, no dependence on the individual who judges.

Keine Wahrheit ist eine Thatsache, d.i. ein zeitlich Bestimmtes. Eine Wahrheit kann freilich die Bedeutung haben, dass ein Ding ist, ein Zustand besteht, eine Veränderung von Statten geht u. dgl. Aber die Wahrheit selbst ist über alle Zeitlichkeit erhaben, d.h. es hat keinen Sinn, ihr zeitliches Sein, Entstehen, oder Vergehen zuzuschreiben . . . immer wieder werden wir sehen, dass dieser Unterschied für die Streitfragen zwischen psychologischer und reiner Logik entscheidend ist.<sup>1</sup>

Husserl thus, in a manner not unlike Bradley's exposition, separates the logical content from the act of judgment.<sup>2</sup> The content which is cut loose from the idea as psychical existence stands for the *Wahrheit*, or the eternal universal. The realm of *Wahrheiten* which Husserl describes suggests, too, Bosanquet's world of meanings which are independent of the acts of judging by which they are expressed.<sup>3</sup> As he puts it: "Man vermenge nicht das Urtheil als Urtheilsinhalt, d.i. als die ideale Einheit mit dem einzelnen realen Urtheilsakt."

Were the content of the judgment dependent upon the judging process, were truth, that is, dependent upon the judging activity of the individual, it would be hopelessly relative; indeed knowledge would be impossible. Husserl maintains that the case is little better if the individual is regarded as socially conditioned, or even if we regard him as expressing the constitution of the human species. Other species, other truths, he proclaims. Nay, the species may die out but truth remains inextinguishable, and invulnerable to the activities of the individual, or of the species. The realm of *Wahrheiten* exists eternally whether the human species ever enters into its possession or not.

Thatsachen sind "zufällig", sie könnten ebensogut auch nicht sein, sie könnten anders sein. Also "andere" Thatsachen, andere logische Gesetze; auch diese wären also zufällig, sie wären nur relativ zu den sie begründenden Thatsachen.<sup>4</sup>

Hat (im Sinne des Anthropologismus) alle Wahrheit ihre ausschliessliche Quelle in der allgemein menschlichen Constitution, so gilt, dass wenn keine solche Constitution bestände, auch keine Wahrheit bestände.<sup>5</sup>

<sup>1</sup> Husserl, *Logische Untersuchungen*, I, 76-77.

<sup>2</sup> Bradley, *Logic*, chap. i.

<sup>4</sup> Husserl, *Logische Untersuchungen*, I, 122.

<sup>3</sup> Bosanquet, *Logic*, I, 5 f.

<sup>5</sup> *Ibid.*, p. 119.

The Formalisten-Psychologisten debate is analogous to the controversy between the absolutists and the humanist-pragmatists as to "whether logic can abstract from the psychological conditions of thinking."<sup>1</sup> Husserl's scholarly and voluminous work anticipates and attempts to meet some of the more recent claims and arguments of the humanists. The "Psychologisten" and the humanists are agreed, in substance, that there is a close and vital connection between the judging individual—his concrete setting of interest, emotion, purposes, and biases—and the meaning or content of the judgment. On the one hand, the controversy runs, truths which are removed from the individual's needs, interests, and desires, and which are in no way determined by these, are meaningless. On the other hand, the absolutists and the formalists join forces in maintaining that truth, which is dependent upon the individual's wants, and whose validity rests upon the degree in which it fulfils them, is hopelessly relative, for it has no applicability beyond the area of individual caprice.

Each party is guilty of the same fallacy. Both sides view the individual as the isolated individual of the psychologist's introspective standpoint. Husserl is right in implying that the *social* nature of the individual cannot avail to extend the validity of his judgment to *universality*; it can at best give it a little wider generality. For society, with the psychologist's individual as the unit of structure, could be simply a multiple or aggregate of particulars. The humanist may insist as much as he pleases that the whole concrete personality enters as a determining factor into the content of the judgment, but the absolutist, accepting the psychologist's account of personality, hesitates the more to read truth, absolute, eternal, and necessary, as the fulfilment, or satisfaction, of this individual. Accordingly if truth is the satisfaction of a need, it is doomed at least twofold to particularity and subjectivity; for the need belongs to this peculiar and particular psycho-physical organism, and the satisfaction is merely a registration of its fulfilment, which may vary from day to day. Thus truths may be many and fickle, contingent not necessary, particular not universal, subjective not objective; in short, truth would be, to quote a familiar refrain from the critics of pragmatism, mere "individual expediency."

It is largely in the interest of establishing the claim for the soundness of the pragmatist's criterion of truth that a distinction be made between logic and psychology, especially to the end that it may become evident that instrumental logic views the "whole concrete personality" in a setting very different from that of the psychologist. There ought,

<sup>1</sup> Schiller, *Studies in Humanism*, chap. iii.



thus, to be a different interpretation of 'satisfaction,' and of 'need,' if there is a different interpretation of the individual.

The particularity and isolatedness of the individual, which psychology construes into a sort of permanent subjectivity, occurs only at certain crises in the evolution of reality. In the tensional moment, when idea and object stand apart, and reality is, so to speak, uncertain of itself, the individual as particular is born; reality is thrown back on its own uniqueness. It is at this moment that the logical need appears—the need to overcome this 'subjectivity,' this inclosedness of idea to idea, but at the same time the necessity for overcoming the isolation, the non-sharability of the opposing 'external reality.' The partiality, or fragmentariness, which characterizes reality as individual is precisely the cause of the birth of this need—the individual's need of finding himself by losing himself in a wider cosmic continuity. Though expressed through the mechanism of what the psychologist calls the psychophysical organism, this need is of the logical and not of the psychological individual; it is the need of the individual as emerging from a reality matrix, and as issuing again into a new individuality, i.e., into fuller consistency with a new social and cosmic environment, which, indeed, has been instituted through his agency. It is because the individual is conceived as particular, initially, that satisfactions of his needs are made to pertain wholly to the domain of his particularity; but the satisfaction of the logical need is that which will make him consistent with reality. Consistency, truth, will be that which will enable him to 'go along with' the sequential, onward, unimpeded passage of reality from one level to another. Thus the satisfaction of the need is not merely a subjective registration that a certain state of consciousness has been achieved, but it is a satisfaction, a fulfilling, of *affairs*. It means that reality and personality are become one; the individual is most, because he is least. It means that the individual *has become* impersonal, and that reality *has been* personalized.

These moments in which the individual exists are, so to speak, the attention moments of the whole cosmic habit. They are the occasions of the reconstructions of old cosmic habits, and the reorganization of new ones. As *media* of *control* and *development*, they cannot sever themselves from the 'stubborn grain of things,' and circulate purely subjective judgments.<sup>1</sup> Hence a judgment which really *satisfies*, i.e., has as its consequences the union of reality and idea into a new status that makes possible the fluent passage into other levels of experience, has in so far forth achieved truth—universal, necessary, objective.

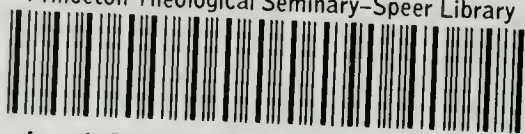
<sup>1</sup> Cf. chap. iii.





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